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Final Cut Special

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A Trip Beyond The Fringe

A NEWBAY MEDIA PUBLICATION

WORLDWIDE EDITION
ISSUE 238 • SEPTEMBER 2010 • UK £3.80

RSS S-0808 & S-4000M • MicW N201 • Sonodyne SM50AK • JDK R22 • Product Sampler: Surround Tools • ARD London Broadcast Facility • Say What You See: ITFC Audio Description • Producer Profile: Cookie Marenco • What's Up: IBC - PLOUD Report & Preview • GeoFocus: Scandinavia • Video Guide: Colour Grading Part 7 • CutScene: Develop Report • Recording News • Post News • Broadcast News • SR News • PLASA News • And More!

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BOB MARLEY, AC/DC, THIN LIZZY

STEVIE WONDER

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SNOOP DOG, WILLIE NELSON

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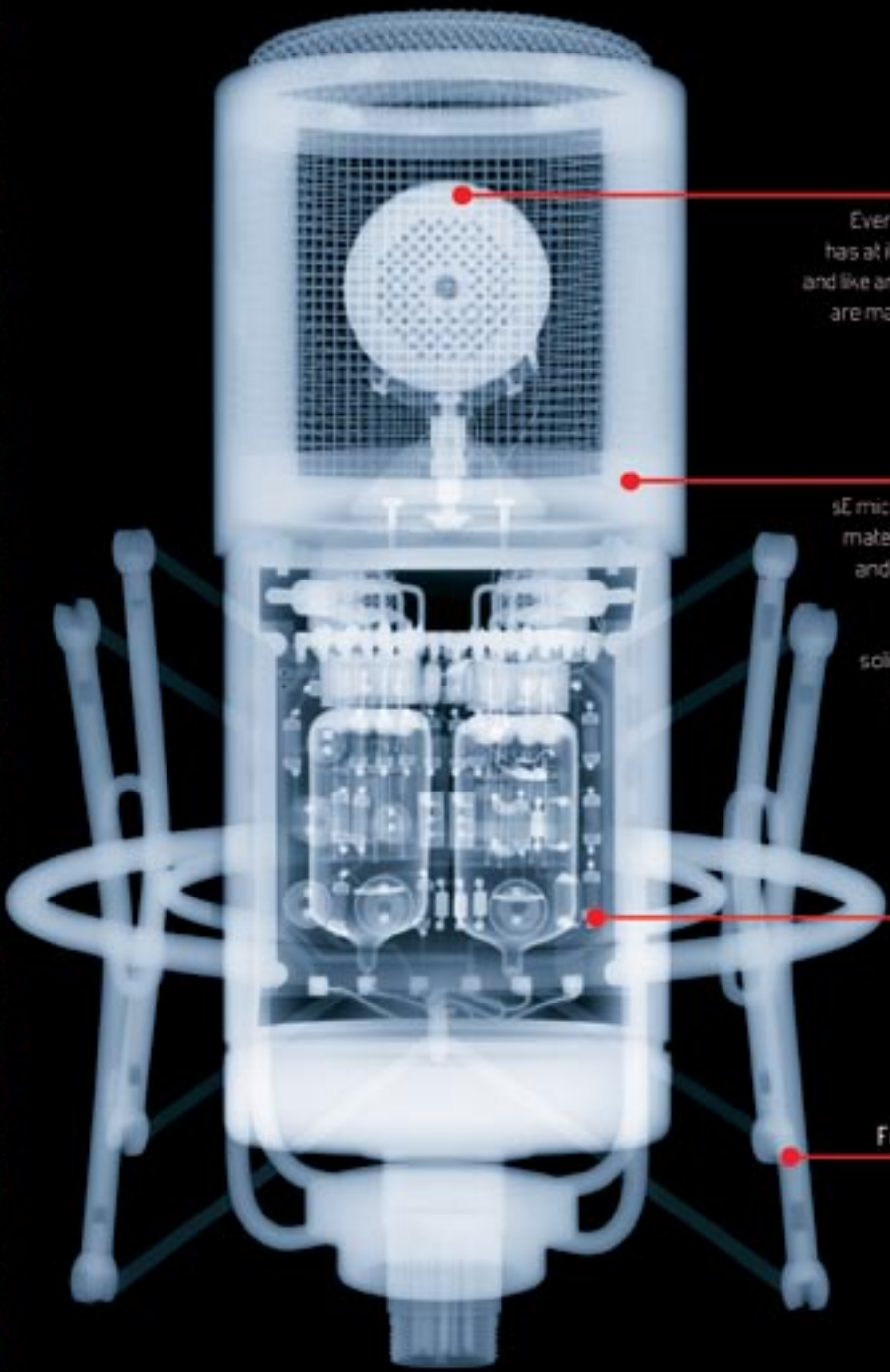

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Mitchell McCoy Carey

03.11.1966 – 18.08.10

Mitch Carey, Marketing and Communications Director of both Sonic Distribution Ltd and sE Electronics International, died unexpectedly in the early hours of Wednesday 18th August 2010 from suspected blood poisoning (at the time of going to press his cause of death is still unconfirmed). He leaves behind him a wife and two young children.

Mitch joined Sonic Distribution as an equal shareholder and Director, alongside Phil Smith and James Ishmaev-Young, in 2004; and along with Siwei Zou the three are also partners in sE. In his time in these roles he has been the creative inspiration of Sonic and sE's marketing, taking ideas generated by the team and turning them into reality, as well as helping to negotiate some of the key manufacturing partnership collaborations including that with Rupert Neve Designs, a collaboration that has already seen the critically acclaimed RNR1, a product which he led to market.

His artwork and branding, and products in which he has had a hand like the global phenomenon the Reflexion Filter, have formed the face of one of the industry's most recent brand success stories in the year that sE Electronics celebrates its 10th anniversary. The relationships he built, both within the companies he directed, and with customers, suppliers, and brand endorsees, are something that will help take the business through the next 10 years and many more to come.

In Memoriam

There are no words to adequately describe the loss of such a truly beautiful man from the lives of the people he touched so deeply; the outpouring of shock and grief from those that know Mitch, from casual acquaintances to close friends and his family, is a measure of how universally loved he is. Words so often used to describe people in life fall far, far from the mark when talking about Mitch. Words and phrases like 'irreplaceable', 'magnificent' (he'd have choked on that one!), 'one in a million'; the list is endless yet none of them do him justice, as so many of us have found whilst trying to express what he meant to us.

He has quite simply been of incalculable influence in so many ways to so many people's lives; the impossible sadness his leaving us brings, is not something you 'get over' with time.

But he leaves behind him of course not only the grief of many, but more funny stories, more perfect thoughts, more crazy ideas and the bravery to follow them through, than anyone any of us have ever known.

His legacy in work is to have played a pivotal role in developing both Sonic Distribution along with his partners Phil and James, and sE Electronics with the addition of Siwei Zou, as the company's Marketing and Communications Director. He spoke very recently about how proud he was of having, after eight years of many good times, some very bad times, and a lot of hard work, of the family of people who make up our team, and how we have finally achieved together the things we set out to… now we could grow forward into an unknown but exciting future with real strength, a lot of laughs, and with many lessons learned. The work family he helped to create has him to thank for the strength of bonding between us, and that is something that we will rely on more than ever now in taking things to what may be a very different future, but one he'd still be proud of.

Mitch also leaves behind him his close family; our hearts go out to his wife Debs, his two sons who he loved more than life itself Dylan and Euan, his Mother Paulene and Father Colin, and his two brothers, Justin and Nathan – as a husband, father, and son I cannot imagine anyone could be more missed when his life was so big, and his love so openly worn and given.

Perhaps his biggest legacy of all though lies in the thought, so often just a platitude but so true in this case, that he lives on in those that knew him, because, quite apart from never being able to forget his empathy and his antics, he simply makes you want to be a better person.

We miss you Mitch.

leader

I'm looking forward to IBC and PLASA. It's been a long non-summer without the promise of new stuff, but now we're into show-season there's nothing stopping us… Except the economy, maybe.

While IBC seems to have sidelined audio a little bit in the actual conference department there'll be no shortage, for example, of metering companies looking to capitalise on the publication of the PLOUD working group.

On this, I'm sure that many part- or wholly public-funded channels will commit fully to the improvement in viewer experience this work should deliver, but I'm not convinced that the main stream, 100 percent advertising-funded channels will enter fully into the spirit of the thing without legislation. Imagine a channel explaining to an advertiser that they've had to tone down the whole 'impact' thing because it's annoying Mrs Wiggins at number 27 a bit. I'm now picturing a Mitchell And Webb Sketch.

And I only say that because it'll be a nice conversation opener on at least eight IBC stands.

Actually the main thing I like about IBC – and most trade shows, come to that – is that I usually find something that I've never seen or heard of before. It might be lurking in a dark corner, or it might be one of the biggest stands in the hall. It's like browsing shop fronts in a town you've never visited before – most are familiar, but there's almost always one thing on one shelf that catches your eye. The web is a wonderful tool, but it still doesn't have much imagination. Random searches are plentiful, but I want some intelligent constraints to the randomness. In this light, the term 'browser' is slightly ironic for most web clients.

So, if you've got eye-strain from browsing 30 different manufacturers' websites for small solid-state audio recorders, or trying to compare ten different consoles by flicking between Safari tabs really quickly, or are waiting for answers to several 'info@' enquiries, then you should get some warm clothes on and come to a trade show. Amsterdam (IBC), London (PLASA), San Francisco (AES, October), and more await you.

See you there.

On a more personal note, I'd like to take this opportunity to extend mine and the *Audio Media* team's deepest sympathies to Mitch Carey's family and colleagues. There's lots to say about him – mostly involving beer and laughter – but most important of all, he was officially a top bloke. Thank you Mitch.

Paul Mac, *Editor*

Paul Mac will be running the London Marathon on April 17th 2011 in aid of the National Deaf Children's Society (NDCS). It would be fantastic if you would consider supporting this endeavour with a small donation to the NDCS via **www.justgiving.com/jogonmac.com** If you want to consider some generous corporate sponsorship, just contact Paul at p.mac@audiomedia.com. Please note, he no longer accepts pies as payment.

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Subscriptions
subs@audiomedia.com
UK £43
European (airmail) £60
International (airmail) £72
Payable in Sterling through UK bank

NewBay Media

www.nbmedia.com

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*Within Broadcast & Production

NEW PRODUCT

Apogee Electronics has brought out Symphony I/O, a multi-channel professional audio interface that is Logic and Pro Tools compatible. With flexible and scalable I/O architecture, the upgraded Symphony System now allows end-users to define a system to their specific needs. Symphony I/O's base chassis can accommodate up to two I/O modules, creating any combination of analogue and digital I/O with USB 2.0 and Symphony and Avid's Pro Tools connectivity. The new Maestro 2 offers integral control of Symphony I/O to the Symphony 64 PCI or Symphony Mobile Express/34 card.

www.apogeedigital.com

PRODUCT UPGRADE

Cedar Audio has released a major upgrade for the DNS One dialogue noise suppressor plug-in and its associated DNS Control System. The Control System now supports PPC-based Macs running OS X 10.4 onward, meaning that the DNS One, the DNS2000, and the DNS3000 may all be used with and controlled from appropriate versions of Pro Tools running on these hosts. In addition, AudioSuite capability has been added to the DNS. Functional improvements to the Control System include new tools that reduce job set-up time and enhancements to the control of multiple DNS3000s over Ethernet.

www.cedaraudio.com

NEW PRODUCTS

Avid Offers HD And HEAT

Avid has announced a series of new hardware and software products. A newly-designed HD Series of interfaces will supplant the existing Digidesign 192 and 96 models. The new line consists of three HD I/O configurations, and the HD Omni and HD MADI. The 3RU HD I/O versions are 16 x 16 analogue, 16 x 16 digital, and 8 x 8 x 8 analogue and digital. The HD MADI I/O offers sample rate conversion on both input and output of the I/O with appropriate clock connections. "We are supporting open architectures," said Tony Cariddi, Segment Marketing Manager for Professional Audio at Avid, "listening to the way people want to work and giving them solutions to get there." The HD Omni is an all-in-one I/O interface featuring two mic pres, a monitor section that accommodates signals up to 7.1, an alternate monitor path, high-end headphone out, and a 14 x 26 Persistent Mixer which can be set up on the front panel or via software, and will function even when the associated computer is turned off for continued monitoring of external sources.

Avid have also released HEAT – Harmonically Enhanced Algorithm Technology – software developed with Crane Song designer Dave Hill which offers tape, tube, and transformer emulations that are applied globally with pre- and post-insert options plus bypass on a channel-by-channel basis.

www.avid.com

NEW PRODUCT

Focusrite Adds New Audio Interface

Focusrite has added the Saffire PRO 14 to its audio interface range. It is an eight-input, six-output FireWire audio interface designed for home-studio musicians looking for a simple I/O device for their Mac or PC. The unit has two mic preamps with 48V phantom power; and eight inputs including two mic/line, two line, Stereo S/PDIF, and Stereo Loopback. The six outputs are made up of four line and Stereo S/PDIF. It incorporates 24-bit/96kHz A-D/D-A converters with JetPLL jitter-elimination technology, and also includes Saffire MixControl, which allows users to set up cue mixes for performers, quickly recall settings, and route inputs to outputs for ultra-low-latency monitoring. It can be bus-powered by its FireWire connection or powered from the AC-DC adaptor, and has MIDI input and output. The Saffire PRO 14 includes the Focusrite plug-in suite of VST and Audio Units plug-ins, as well as a license for Ableton Live Lite 8.

www.focusrite.com

NEW PRODUCT

Vir2 has brought out Violence, a Kontakt-powered virtual instrument which focuses on extremely unusual textures, manglings, distortions, and perspectives on the solo violin. It features a deconstruction of a solo violin recorded from numerous angles: bowed, scraped, hit, plucked, played with mallets, chopsticks, guitar picks, and wet fingers.

www.timespace.com

NEW PRODUCT

JZ Microphones has released a pop filter with a unique shape that is designed to reduce plosive sounds and to avoid altering the harmonic content of the sound source. It has an extended gooseneck and a special attachment for fast and easy action when applying the pop filter to the microphone stand.

www.jzmic.com

NEW PRODUCT

Sample Logic has released Cinematic Guitars, a collection of morphed guitar instruments within an adaptable core effects sequencer engine powered by the Native Instruments Kontakt Player. The library is derived entirely from recordings by Steve Ouirnette.

www.timespace.com

NEW PRODUCT

Cinesamples has released Hollywoodwinds, a comprehensive sample library of orchestral woodwind ensemble aimed at orchestral film scoring. The collection features organic recordings with a collection of scales, runs, phrases, chords, textures, trills, FX, and full ensemble patches.

www.timespace.com

NEW PRODUCT

Hosa Technology has released the Tracklink Microphone to USB interface. Tracklink is a 10-foot, XLR3F to USB Type A interface cable that enables users to make a single point-to-point connection between the microphone and a USB port. Tracklink is fully functional with both condenser and dynamic microphones, and is compatible with most Windows and Mac audio software.

www.hosatech.com

PRODUCT UPGRADE

MOTU is now shipping BPM version 1.5, a major update of its rhythm production virtual instrument and UVI sound library for Mac and Windows. BPM 1.5's expanded library of over 19GB of kits, patterns, samples, loop, and instruments covers dozens of musical styles, such as big beat, dancehall, dub, electro, hard trance, drum 'n' bass, and progressive. New features include enhanced support for hardware MIDI controllers, a note repeat function, and bank effects.

www.motu.com

NEW PRODUCT

Calrec Serves Up H2O

Calrec Audio has introduced a brand-new management system for its Hydra2 network router. The Hydra2 Organizer, or H20, allows the user to control a Hydra2 network independently from any console control surface. Users will be able to set up routes and configure access rights to all desks on a given network, as well as label I/O boxes and ports for ease of identification. The application also offers the ability to arrange ports into folders to make them quicker and easier to locate. The new software is browser-based, allowing network access from a laptop or PC and is compatible with Windows, Linux, or OS X. "Our new H2O control system further integrates Hydra2 into any multi-console installation," said Henry Goodman, Head of Sales and Marketing at Calrec Audio. "Its user-friendly interface works independently of the console and permits different levels of user access to be granted to different personnel."

www.calrec.com

NEW PRODUCT

New X-Rack Module

Solid State Logic has unveiled a new module for the X-Rack modular rack system. The X-Rack Stereo EQ module is a stereo version of SSL's console Channel EQ. It is a classic SSL four-band parametric EQ that can be used as an all-round frequency adjustment tool kit. It is a fully-featured EQ with high- and low-bands switchable between shelving or fixed Q bell curves and two mid-bands each with variable Q control. This module introduces a Selective Mode switch that enables independent switching of high and low bands and mid bands between SSL's E and G series console EQ characteristics to provide a versatile EQ design. The module is the eleventh available for the modular rack system.

www.solidstatelogic.com

NEW PRODUCT

New from Boss is the BR-800 Digital Recorder, a portable multi-tracker. The battery-powered recorder offers touch-sensor switches and SD-card recording media, with the ability to record up to four tracks or play back eight tracks simultaneously. The EZ Recording mode will interactively guide users through the recording process, and the RETRY function offers the ability to re-cue automatically to fix mistakes.

www.BossUS.com

NEW USER

Porto-based Stage Studios has installed an Audient Zen console and a complete Black Rack comprising five each of the compressor and equaliser modules. The decision to go for Audient's Zen was made by Studio Owner Sergio Silva. "Whilst studying I heard a lot of good feedback about Audient products – in particular the crystal clear sound of the consoles, the good headroom, and great mic preamps," he explained.

www.audient.co.uk

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FACILITY UPGRADE

The Richard Attenborough Theatre, located in the purpose-built Sound Centre at Twickenham Film Studios, has been awarded Premier Certification by Dolby following a six-week refurbishment and upgrade. Premier status is Dolby's measure of technical excellence at every level of a studio's operation. Room acoustics, monitoring standards (visual as well as audio), equipment selection, installation standards, synchronisation accuracy, mixing competence, and technical experience are all measured and evaluated as part of the certification process.
www.twickenhamstudios.com

NEW PRODUCT

Reducing The Noise Of Waves

Waves has unveiled the third processor in its post production line, the W43 Noise Reduction Plug-in. Inspired by the classic, long out of production Cat. 43 hardware noise reduction tool, Waves' new W43 builds upon the legacy of the hard-to-find unit that has long been a post production favourite. The W43 plug-in will remove ambient noise like hiss, hum, traffic noise, wind, and air conditioning, delivering minimal artifact multi-band noise reduction like the original hardware. Waves W43 offers four-band noise suppression controlled by four faders, a global threshold, and an engage button. The workflow approach is designed to be familiar to engineers who have previously used the Cat. 43 hardware for noise reduction. It is both PC and Mac compatible, supports multiple simultaneous instances, and features true Pro Tools integration, full recall, zero latency, full automation, up to 24-bit 192kHz resolution, and support for TDM, RTAS, Audio Suite, VST, and AU. Waves also says that no degradation of sound occurs as a result of I/O conversion.

www.waves.com

NEW USER

Stardelta Audio Mastering has installed two Prism Sound ADA-8XR multi-channel converters. It has also bought a Maselec MEA2 equaliser and Maselec MLA2 compressor, which are part of the Prism Sound family. The new facility, based in Devon, was established by Lewis Hopkin and Aidan Wallwork, who have more than 30 years experience of engineering and post-production between them. "We were both well aware of the high pedigree of Prism Sound and Maselec gear, as this equipment is a staple in many top recording and mastering studios," said Wallwork. The pair held a blind converter shootout, with the result coming down in favour of the ADA-8XRs.
www.prismsound.com

Does your console speak Pro Tools?

...and Nuendo

...and Logic Pro

...and Pyramix

...and Sequoia

...and Digital Performer

...and Final Cut Pro?

S5FUSION

A complete professional mixing package that fuses Euphonix' new processing DSP engine with EuCon Hybrid, a technology that allows the console surface to simultaneously and seamlessly control its own DSP channels as well as tracks from multiple external DAWs.

NEW INSTALL

The ABC Network News has installed a new 96-channel, 32-fader Solid State Logic C100 HDS Digital Broadcast console in a new control room at its Washington Bureau studio complex.

The C100 HDS is a scalable audio console ABC considers offers the flexibility to address all its programming production needs, including 5.1 surround mixing. It features a fast and comfortable interface that is easy for both staff and freelance engineers, and joins a C100 HD already in service in another studio within the complex.

www.solid-state-logic.com

SOFTWARE UPGRADE

Lawo has announced a new software release, v4.10. Available from download from Lawo's Download Centre, the new version allows Lawo's routing matrix DSP card – the mxDSP card – to be controlled and set up directly from the console. It also offers full compatibility of the AdminHD configuration tool and the mxGUI with Mac OS X Snow Leopard and Microsoft Windows 7 (32-bit and 64-bit). Other features include the ability to adjust the movement of AfV slaves, and custom functions have also been expanded.

www.lawo.de

NEW USER

Calrec Consoles In Premier League

IMG, the world's premier sports, entertainment, and media company, has ordered two 32-fader Calrec Omega consoles to mix audio on coverage of English Premier League football games, which IMG has the contract to distribute internationally. A third 40-fader Omega will handle audio on the Premier League's new 24-hour HD football content service. All three desks will be installed at IMG's studios in Chiswick, West London. "We had to buy an audio console for the new channel, as that includes surround sound content, and we took the opportunity to replace the consoles that look after the core distribution contract," explained Richard Allingham, IMG's Chief Engineer in the UK. "We had three other desks in for trials, but in the end we settled on the Calrec Omegas very quickly, by asking our audio engineers which ones they would find easiest to use – and the Calrec won the vote."

www.calrec.com

NEW PRODUCT

Jünger Audio T*AP New Processor

Jünger Audio will be showing the T*AP TV Audio Processor at this year's IBC Convention in Amsterdam. The device, which is primarily designed for TV playout facilities, will provide loudness control, upmix, and surround sound processing for up to eight channels of audio. The wide band eight channel processor focuses on automatic and adaptive loudness control using Jünger Audio's LEVEL MAGIC algorithm. Using the proprietary Spectral Signature technology it also offers dynamic equalisation, which, according to Jünger Audio, means that the sound can be coloured much more easily than with a traditional multi-band sound processor. Optional Dolby Decoding and Encoding, as well as metadata management, are also provided along with 5.1 downmix and Jünger Audio's 5.1 upgraded UPMIX circuit.

The new processor is capable of handling digital inputs and, through interface slots, all other usual audio formats including all SDI versions. It is controllable through front panel and Web-based GUO, plus remote control, and comes with a redundant power supply as standard.

www.junger-audio.com

NEW INSTALL

NanfangTV, a regional Chinese broadcast station covering an area of approximately 100 million people, has equipped its new 14 camera HD OB truck with an intercom system from Riedel Communications. RacPro, Riedel's Chinese partner, installed a system combining Riedel Artist digital matrix intercom and Performer digital party line technology. The Artist digital matrix intercom mainframe is equipped with redundant CPUs and power supplies.

www.riedel.net

NEW USER

Linear Acoustic has announced that the hit US TV show *Dancing With The Stars* used the Linear Acoustic AERO.qc Audio Quality Controller during the entire 2009-10 run of season 10. The show is produced live to air from CBS Stage 46 in Los Angeles. Audio is mixed on an SSL analogue stereo console, and then the stereo mix is sent through an A/D converter into the AERO.qc.

www.linearacoustic.com

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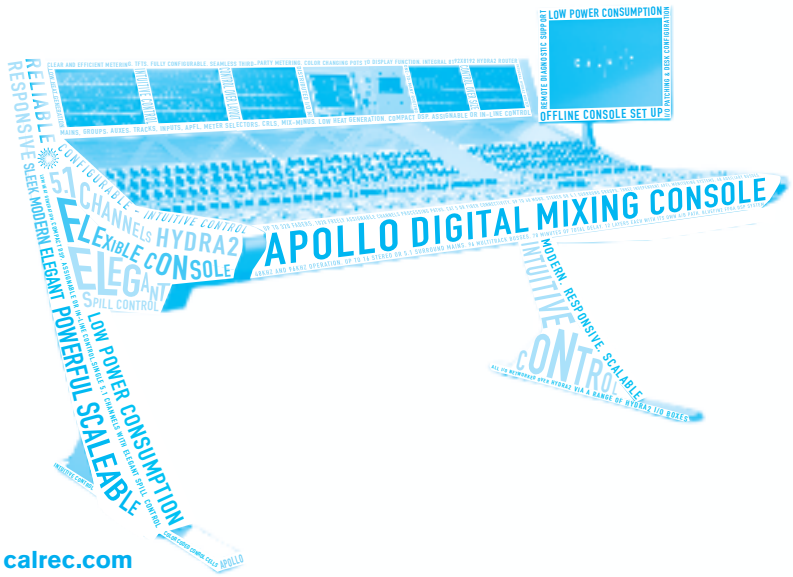

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www.merging.com

NEW PRODUCT

Void Acoustics has launched a new range of four-channel amplifiers – the Infinite QX – in response to the market demand for greater power in smaller, lighter weight equipment. Based on the Infinite X architecture, the Infinite QX amplifiers are designed to provide enhanced performance, deploying a newly developed advanced MOSFET output stage. Each channel also features a fully adjustable crossover filter. Each crossover can be configured as either Hi-Pass or Lo-Pass at any frequency between 70Hz to 5kHz.
www.voidaudio.com

NEW ACQUISITION

CSR has announced the acquisition of Belfast-based APTX, following a three-year collaboration under the CSR eXtension Partner Programme, which saw APTX's audio compression used on CSR's wireless audio platforms. CSR says the acquisition will allow it to substantially strengthen its offering in the growing real-time streaming audio market for mobile and wireless consumer applications, and support its expansion into broader audio markets.
www.aptx.com

NEW PRODUCT

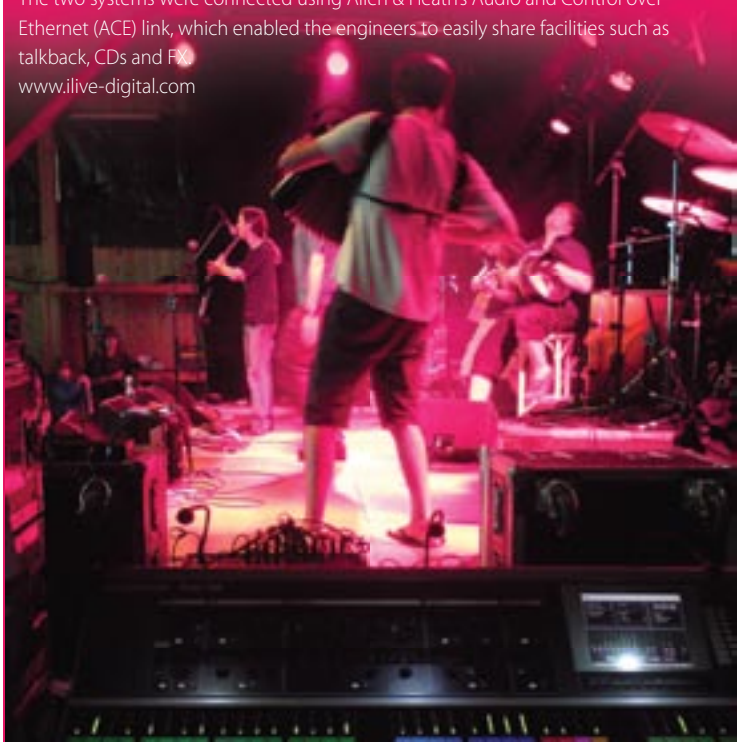
MTR has added a new product to its stageClix family, the stageClix Pack, a belt-pack version of the Jack digital wireless system. The Pack offers features seen on the Jack, such as rechargable NIMH batteries, receiver with built-in charger, 15 hours playing time on one charge, no menus, 24-bit digital converters, no audible latency, 12 user-selectable channels, encoded transmission, and triple-diversity, three-frequency transmission in each of the 12 channels.
www.mtraudio.com

FIELD REPORT

Allen & Heath Live In Switzerland

Allen & Heath's iLive digital mixing system was used to manage two recent festivals held in Switzerland. For the second year running, the iLive system was used to mix monitors at Switzerland's Festival de Loup in Corbeyrier. The two-day festival is a celebration of everything Celtic, with Celtic food, folk tales, dance, and music, featuring top Irish band Grada, and popular French band Blackwater. A modular iLive system, comprising an iDR10 MixRack and iLive-144 Control Surface, was employed by Engineer Roland Dupertuis to manage musicians with a range of instruments from electric guitars to bass, to harps, mandolins, bagpipes, and accordions.
"I have managed monitors for the festival for several years and decided to use A&H's digital system again this year," said Dupertuis. "As usual, iLive enabled fast set change overs, and was very simple to use. The smiles on musicians' faces told me the sound was great!"

A modular iLive-144 system on monitors and an iDR-48 MixRack with iLive-T112 Control Surface at FOH were used for the first time at the Journée des 5 Continents cultural festival in Martigny, managed by Sierre PA company, Sound & Light.
The two systems were connected using Allen & Heath's Audio and Control over Ethernet (ACE) link, which enabled the engineers to easily share facilities such as talkback, CDs and FX.
www.ilive-digital.com



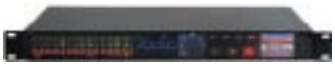
FIELD REPORT

Viva Optocore In Vegas

The largest Optocore single ring network ever installed is currently in use in the Cirque du Soleil's Viva ELVIS production at the Aria Resort and Casino in Las Vegas. The system was chosen by Cirque's Sound Designer Jonathan Deans after witnessing an Optocore demonstration in New York by Optocore President Marc Brunke. Following discussions in which Deans laid out the unique requirement for Viva ELVIS, Optocore accelerated development of the system to provide for multiple clients in a server-based topology. "We're the first to use client-servers," said the show's Assistant Head of Audio Aaron Beck.

"Up until now, Optocore was run from a single computer. We wanted multiple clients to be able to control any part of the network – we have two clients in the monitor room, one at the front of house, one in the equipment room, and another in the RF area." With 21 network devices on the ring out of a possible 24, the system has ample room for expansion. The 21 devices handle 504 audio inputs and 776 outputs, converted to 48 kHz AES digital audio.
www.optocore.com

PRODUCT UPGRADE



JoeCo, manufacturer of the Blackbox Recorder, has announced the release of a major new software update, version 2.0, that offers front-of-house engineers greater flexibility and speed when working with the 24-channel live audio recorder.
The latest update includes the ability to create a headphone monitor mix with level and pan on every track, and a new Name Manager for easier creation of templates and modification of track and song names. Navigation is also speedier, with additional keyboard shortcuts for transport control and numerous menu options, with the ability to access certain non-critical menu functions while in record mode.
www.joeco.co.uk

FIELD REPORT

Two Eclipse consoles from Innovason were selected by TSE AG of Berlin to handle FOH and monitoring duties at the 19th Classic Open Air event in Berlin. TSE AG set up the sound reinforcement system according to the principles of the delta stereophony system, which ensures that the sound is heard as though it is emanating directly from the stage, regardless of the position of the seating or the loudspeakers.
The event required 96 mic inputs, 16 line inputs, and 48 outputs.
One Eclipse was used for FoH and another for monitors including internal effects plug-ins, whilst two stage racks delivered the I/Os.
www.innovason.com

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www.allen-heath.com/gsr24

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WORLD CLASS MIXING

Allen & Heath

Allen & Heath will be introducing the GS-R24 studio recording mixer at PLASA in September, exhibiting on stand 1-E9. Specifically aimed at busy project studios, the GS-R24 is a high quality analogue console for the key mixer functions of preamp and EQ, combined with a choice of interface modules, motorised faders for automated mixing, and MIDI controllers for tactile interfacing with software DAWs. The first interface module available is a 32-channel FireWire interface with ADAT optical connectivity.

Allen & Heath will also be displaying the latest developments in the iLive digital mixer family, including new I/O hardware, and audio networking plug-in cards for Dante and RockNet.

www.allen-heath.com

Martin Audio

Martin Audio will give a UK exhibition debut to its MLA Multicellular Loudspeaker Array at this year's PLASA show. Martin Audio R&D Director Jason Baird explained, "Our primary aim with MLA was to take the guesswork out of daily system design and enable the engineer's mix to be delivered throughout an audience with precision, consistency, and repeatability." MLA's methodology replaces trial-and-error array design with intelligent numerical optimisation of the array's output based on a highly accurate acoustic model. The multi-cellular format has six individual cells in each enclosure, each with its own onboard DSP and power amplification. Martin Audio's proprietary Display 2.0 system design software automatically calculates FIR DSP filters for each cell and a redundant-ring audio network (U-NET) downloads the settings into each array enclosure. Martin's VU-NET software provides real time control and monitoring of the system.

Also on display at PLASA will be the new MLX powered, flyable subwoofer capable of a peak output of 150dB at 1m and MLD downfill as the components of a system managed by the Merlin 4-in/10-out dedicated controller and network hub. Audio input is via analogue, AES3 or U-NET.

www.martin-audio.com

Optocore

Optocore will be launching its new AES3 (AES/EBU) I/O card for its X6R 16-channel converters at the show. The new card provides 16 AES channels, with the ability to change the inputs or outputs in groups of eight. Complementing the existing mic/line conversion cards, the AES3 offers a number of new device options. The user-configurable architecture could offer significant benefits. For example, devices equipped with an AES3 card and an eight-channel analogue converter card will allow the user to decide whether they want to use 16 AES channels or use the eight analogue channels combined with eight AES3 channels.

www.dasaudio.com

Alcons Audio

Alcons Audio will be exhibiting its pro-ribbon based sound system programme at PLASA this year. Alcons offers a complete portfolio, from point-source through line-source to line-array solutions, all based around proprietary and multiple-patented pro-ribbon transducer technology. The LR7 micro line-array system will be on the stand, together with the LR7 Bass system. Also on display will be the BC543 cardioid subwoofer. This self-contained triple 18-inch subwoofer enables cardioid pattern control, when driven by the Digital Drive Processor in the ALC amplified loudspeaker controller.

www.proribbontechnology.com

Ateis International

PLASA 2010 will provide the first major public showcase for Ateis International's new integrated public address and voice alarm system, the IDA8. Combining digital audio signal processing, matrix control, message play-out, and microphone capability, the unit is the most advanced of Ateis' PA/VA products. The IDA8 is based on the well-established IDA4, which has sold tens of thousands of units internationally since its launch five years ago. Work on a new generation version began 18 months ago to keep up with technology and what users expect from equipment in the exacting PA/VA sector. The IDA8 has extended DSP memory and communications capability, and is easier to use and set up. "In a typical installation IDA4 was the central controller but it had to be connected to a network and a loudspeaker line monitoring device," explained Neil Voce, Sales Director of Ateis UK. "That was three separate devices but now all those functions have been combined into one box, the IDA8."

www.ateis-international.com

APEX

Apex will be presenting a new version of its dBQ-zero EQ at PLASA 2010. The new dbQ-zero matches the previous product in terms of its 30-band constant-Q graphic EQ section on each channel, plus a filter section consisting of high-pass filter, high and low shelving equalisers and two notch filters. Apex has focused on improving inter-channel crosstalk and THD+N figures, as well as load stability with the implementation of updated line driver circuitry.

The dbQ-zero also features a more rugged chassis as well as a new, intuitive user interface.

www.apex-audio.be

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Polar Music Prize Winners 2010

Björk & Ennio Morricone are the latest recipients of the prestigious international award.

The Polar Music Prize 2010 is being awarded to Italian composer, arranger, and conductor Ennio Morricone and to Icelandic artist Björk. As *Audio Media* went to press, the laureates were due to receive their awards from His Majesty King Carl XVI Gustaf of Sweden at a televised gala ceremony at the Stockholm Concert Hall, followed by a celebratory banquet at Grand Hôtel. Each recipient receives a total amount of one million SEK.

The awards were founded in 1989 by the late Stig Anderson. Publisher, lyricist, and Manager of ABBA, he played a key role in their worldwide success. The name of the prize stems from Anderson's record label, Polar Music. It is awarded to individuals, groups, or institutions in recognition of exceptional achievements in the creation and advancement of music.

Annually, the Polar Music Prize awards two laureates in order to celebrate music in all its various forms and to emphasise the original intention of the Polar Music Prize: to break down musical boundaries by bringing together people from all the different worlds of music.

The board of the Polar Music Prize Foundation consists of representatives from the Stig Anderson family, SKAP (The Swedish Society of Popular Music Composers) and STIM (The Swedish Performing Rights Society). The task of scrutinising nominations submitted and selecting the ultimate laureates is empowered to The Polar Music Award Committee comprising of internationally renowned artists and musicians, as well as other key figures in the Swedish music industry.

This year's citations read as follows: "Ennio Morricone's congenial compositions and arrangements lift our existence to another plane, making the mundane feel like dramatic scenes in full Cinemascope. When, in 1964, Ennio Morricone scored the soundtrack for the Western A Fistful of Dollars, budgetary constraints prevented him from using a full orchestra. Instead, he built up a brand new kind of music that set the tone for half a century of film music, but also influenced and inspired a number of musicians in the spheres of pop, rock, and classical music."

"With her deeply personal music and lyrics, her precise arrangements and her unique voice, Björk has already made an indelible mark on pop music and modern culture at large, despite her relative youth. No other artist moves so freely between avant-garde and pop. With her albums and videos, Björk has taken avant-garde to the top of the charts. She has also always embraced technological advances, combining computers with ancient sounds. Björk has introduced an arctic temperament to popular music and shown how passionate and explosive it can be. Björk is an untameable force of nature, an artist who marches to nobody's tune but her own."

Today, the Polar Music Prize has become one of the most prestigious music prizes in the world. The list of winners includes: Sir Paul McCartney, Dizzy Gillespie, Witold Lutoslawski, Nikolaus Harnoncourt, Quincy Jones, Mstislav Rostropovich, Sir Elton John, Joni Mitchell, Pierre Boulez, Bruce Springsteen, Eric Ericson, Ray Charles, Ravi Shankar, Iannis Xenakis, Stevie Wonder, Bob Dylan, Isaac Stern, Burt Bacharach, and Robert Moog.

Puk Studios Prospers

Denmark's Puk Studios, one of Europe's longest-serving 'destination' residential recording studios, continues to prosper.

"The studio business in Scandinavia remains volatile and nobody knows where it will end up," says Puk MD Peter Iversen. "I believe that big studios have to be special to survive.

We do have facilities that are very special and we have been in a position where we have been able to invest in the recent years. We have upgraded both rooms with new consoles and Pro Tools rigs.

"The main room now has an SSL 9000 and the mix room an SSL C200. Both are running the latest Pro Tools with 64 I/O in the recording room and 96 I/O in the Mix Room.

"We have recently recorded Scandinavian Nephew, Carolina af Ugglas, Lis Sorensen, and Bjorn Eidsvag, and mixed the music score for a major new release for Disney featuring Bliss and Meryl Streep. With all the space we have plus the residential amenities, we are also used a lot for writing camps, product introductions, and training."

Puk's recently refurbished mastering service is doing good business. "We do some catalogue work and some new releases," says Iversen. "There are also quite a lot of home-produced projects that like that final touch and a new set of ears on their recordings, and since most of these are all recorded and mixed in the same room, it's a very good idea. We still use Sonic Studio and Weiss for this room, and the most recent update includes new amps for the main monitors and a TC System 6000 for which we now have ordered the new MKII Update."

Around eighteen months ago, Puk diversified into the live sector – a move that is paying dividends. "Compared to the recording business, live rentals is proving a totally different ballgame," says Iversen. "Here, we have a growing business and things are looking very promising indeed.

By the year-end, a-ha's farewell tour, aptly named Ending On A High Note, will have covered four continents and fifteen countries. The band's final three shows ever, slated for early December in their home-country of Norway, sold out within days of their October 2009 announcements, well over a year in advance. The tour is traveling with a full complement of Sennheiser wired and wireless microphones, including a Sennheiser SKM 5200 with a Neumann KK 105 capsule for lead vocalist Morten Harket, as well as Sennheiser wireless personal monitors.

Steps Music Moves Up With SSL

Steps Music in Oslo, part of a 4,000-square-foot shared studio complex, has installed a Solid State Logic AWS 900+ SE console with two Alpha-Link audio converter units to meet expanded client demand. Steps Music uses the AWS 900+ SE for music productions from pop to classical, to spoken word and post production for film and TV. The Steps Music control room services acts performing in any of three studio rooms within the facility.

"The AWS 900+ SE was the perfect choice to enhance the continued success of Steps Music," says Atle Rovik, owner of Steps Music. "While I had a controller and a Nuendo system with some outboard gear, I really needed to look at buying banks of outboard mic amps and EQs to meet the needs of the clients I was attracting. The AWS was a very nice way for me to upgrade my studio with great mic amps and equalisers. My clients are very happy with this choice."

Rovik was educated as a sound engineer and originally worked freelancing in television sound for a regional Norwegian TV network and music recording studios before forming Steps Music in 2000. The business has grown steadily ever since, prompting the move to the AWS 900+ SE.

"I was very good at mixing in the box, but I kept hitting limitations," Rovik continues. "I needed a real console and the AWS is as real as it gets. The AWS actually helps me create even better mixes than before because of the way the console is designed. Now I find that I can work faster because the great sound is there right from the start. The quality is just more solid, more crisp, and more articulate. The signal routing is wonderful and the bus compressor is just amazing. It makes my mixes come alive."

He continues, "All the owners and other artists love the sound I am now getting with my mixes. And word has gotten around, so I am now attracting more clients. Beyond a simply great console, the AWS 900+ SE is a real investment for the future success of my studio."

Electro-Voice Reinforces Trondheim's Club Gossip

Since its opening in mid 2009, up to 900 guests daily have been making their way to the fashionable Club Gossip in Trondheim. The managers of the new dance temple offer a variety of events and genres on the club's three different levels, ranging from house, rock 'n' roll, soul, and R&B playback to live concerts – a bandwidth that demands considerable versatility from the sound reinforcement system.

After carefully comparing the offerings of three other suppliers, Gossip's managers opted for a sound reinforcement system from Electro-Voice, designed by Norwegian installation engineers and audio consultants avon a|s.

The nerve centre and heart of the system is found in the air-conditioned equipment room on the first floor of the club, where 10 of Electro-Voice's CPS series amplifiers deliver the power, while a NetMax N8000 signal processor with IRIS-Net v.2.0 software supervises the system via a WLAN router. It's a set-up that has attracted considerable notice on the Norwegian club scene, since the integration of the NetMax N8000 – only two rack units high – brings with it a wealth of technical options.

Erlend Aasved, who is responsible for the club's sound equipment, is very impressed with the installation: "Everywhere in the club, the sound is outstanding; moreover, the system is ultra-reliable and child's play to operate."

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The Never-Ending Problem

It's an issue that's persistently perplexed industry pros for years, which, despite the best intentions and purposes still lingers. Can the EBU PLOUD working group succeed? KEVIN HILTON takes an updated look at the ongoing loudness problem.

After differing opinions and various attempts to deal with the situation, the International Telecommunication Union issued ITU-R BS1770 (Algorithms to measure audio programme loudness and true peak audio level) and ITU-R BS1771 (Requirements for loudness and true peak indicating meters) in 2006-7.

These laid down basic recommendations for how to monitor and measure loudness, making for a prescribed way of producing consistent audio levels for both television and radio. Meter manufacturers including Chromatec, Dolby, Dorrough, TSL, RTW, and DK-Technologies had been producing new style meters from the late 1990s onwards, using proprietary algorithms, and now have a standard on which to base second generation products.

Broadcasting regulators also used the ITU specifications to lay down rules for broadcasters and post-production facilities. In the UK the Broadcast Committee on Advertising Practice (BCAP) issued a guide that came into force on July 7, 2008. It recommended the use of loudness meters to quantify comparative sound levels, rather than PPMs (peak programme meters) and VU (volume unit) meters.

Multi-Channel, Multi-Problem

The most problematic area is multi-channel digital services, where a large number of channels are played out automatically, with commercials inserted as part of the process. From personal observation – and listening – there is still a sizeable difference in the levels of the main programmes and the ads.

A second opportunity to deal with loudness comes this month. The EBU PLOUD working group is due to publish five documents that specify technical recommendations for measuring, monitoring, and dealing with loudness. The key recommendation is R128, described by Florian Camerer, Chairman of PLOUD and an Audio Engineer at ORF, as a short and precise description of how to monitor loudness.

R128 and the four other documents – Tech 3341, 3342, 3343, and 3344 – have taken nearly two years of research and evaluation of equipment and techniques to complete. At the time of going to press Tech 3341and 3342 had been delivered to the EBU Technical Committee for approval.

Andrew Mason, Chairman of the EBU's Expert Community on Audio (ECA), the parent group of PLOUD, says 3341 and 3342 "support R128". Loudness meters will have to comply with these documents; 3341 defines precise details for loudness meters, known as EBU Mode, and 3342 describes how to calculate loudness range and average loudness as recommended by R128.

The final two documents, 3343 and 3344, were still with the PLOUD group during the middle of August. These are more substantial texts than 3341 and 3342, with the first running to approximately 80 pages and the second in the region of 60 pages. This is not surprising as the subjects are: Practical Guidelines for Production and Implementation, outlining the practical application of R128; and Distribution Guidelines, covering how material is distributed.

"The plan is to have all documents ready for publication in time for IBC," comments Mason, who is also a member of PLOUD and a Senior Research and Development Engineer in the BBC R&D department. "At the moment R128 and 3341 and 3342 are ready and will be published unless there is an objection from the Technical Committee. Because the last two are so big we are not 100 percent sure they will be ready for IBC. We hope they will be, but they still have to be approved by the Technical Committee."

Actual Users, Not Theorists

DK Technologies is a member of the manufacturing group attached to PLOUD and has meters on the market conforming to existing specifications. Director of Sales and Marketing Richard Kelley says the company has been liaising with users rather than theorists in developing its products and will work with any rules laid down. "We want to respond to what the requirement is, rather than say what the requirement is," he comments.

A situation that has annoyed Kelley is seeing products from some other manufacturers claiming to be R128 compliant, when the recommendation has not yet been published. "That kind of thing does not help matters," he says. "It's wrong because this is a very small market, so why are people jumping up and saying they comply with something that doesn't exist?"

Trinnov Audio has added loudness capability to its SmartMeter system, which is promoted as complying to R128. Felipe Avila-Reyes, Director of Marketing and Business Development, says Trinnov has been a participant in PLOUD since last year and because the core specs of R128 have not changed, only the terminology, it felt confident in claiming compliance. "France Televisions wanted to start using R128 as soon as possible, so we delivered our first implementation to them this spring," he explains.

A Fresh Page

Andrew Mason says the story of loudness and metering for the 21st century is only just beginning: "There is a revolutionary move in metering, with peak and true peak to consider as well." Bosse Ternstrom, a Sound Engineer and Producer with Swedish Radio R&D who sits on PLOUD, says the most important thing is to make metering easy. "By that I mean just a glance at the instrument should give you the information you need at any given time," he explains. "It should complement what you are hearing. Of course, if you stop listening and only look at fancy graphics you will be lost."

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Up Early For Audio At IBC

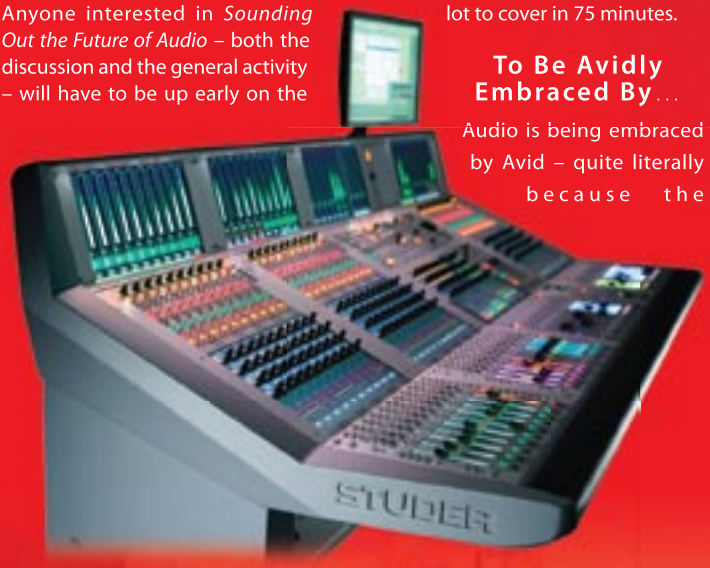
KEVIN HILTON explores between the aisles of IBC 2010.

The big turning point for broadcast audio today is the shift away from compressed carriers – primarily Dolby E – in favour of 16-channel discrete embedded operation. The trouble is, this way of working makes audio appear merely an adjunct of video.

At first glance that's the case at this year's IBC, where audio is not just embedded alongside the vision equipment, it's in danger of being overshadowed completely by all the hooh-hah surrounding 3D. Mind you, everything seems to be put in the shade by stereoscopy these days.

3D certainly dominates the conference programme, which boasts only one audio session this year. Anyone interested in *Sounding Out the Future of Audio* – both the discussion and the general activity – will have to be up early on the morning of Friday, September 10. Chaired by Bill Foster, the presentation will look at synchronising sound and pictures in the age of new coding formats, optimum monitoring for surround sound and, inevitably, the possibility of 3D audio to accompany stereoscopic pictures.

Discussing all this are ORF Sound Engineer Florian Camerer, taking time out from his responsibilities with the PLOUD committee on loudness (see p.18), John Mailhot, Director of Product Architecture, Infrastructure and Networking Organisation at Harris Broadcast Communications, and audio signal processing pioneer Stephen Smyth, Chief Executive of Smyth Research. They've got a lot to cover in 75 minutes.



To Be Avidly Embraced By...

Audio is being embraced by Avid – quite literally because the company has left behind the Digidesign name and is marketing Pro Tools under its own marque. So Avid will appear as an audio brand at this year's Convention, with the latest interfaces and software for its DAW systems alongside the video editing and compositing workstations.

The new products for the Pro Tools HD Series are the HD I/O, HD OMNI, and HD MADI interfaces, which are designed to give users greater flexibility in how to record, mix, and playback. Tony Cariddi, segment Marketing Manager for Avid pro audio, says the aim is to give full openness, allowing the system to work with third party analogue and digital products.

The HD Series add-ons are aimed at broadcasting and post as much as music recording. The other new introduction, HEAT (Harmonically Enhanced Algorithm Technology), was designed more with the music market in mind. It is a software package that can recreate the warmth and analogue sound of old recording consoles.

> "...audio is not just embedded alongside the vision equipment, it's in danger of being overshadowed completely by all the hooh-hah surrounding 3D. Mind you, everything seems to be put in the shade by stereoscopy these days."

Across The Big Blue

This year's show will also allow audio types on this side of the Atlantic to see how Euphonix is fitting into the Avid fold. Consoles looks set to be a fertile ground at IBC 2010. Lawo is officially launching its Sapphire on-air desk for the radio market. Alongside

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this will be the Nova29 16-port MADI router designed for small to medium sized installations.

Studer's Vista 9 is less of a surprise but Amsterdam will be the first opportunity for many to lay eyes and hands on it. A particular feature is the metering display, which shows all configurations from mono to 7.1 in the top half of the monitor screen, with the lower portion containing bus assignment or images of the surround sound composite.

A year ago Calrec Audio was promoting the Apollo desk. Twelve months on and Calrec is unveiling not a new console but a browser-based networking control program that enables Hydra2 networks to be reconfigured from a PC, rather than the audio desk.

Hydra2 Organizer (H2O) can work with Windows, Linux, or OS X, and is able to configure routers and access on all desks on any designated network. The system is principally intended for big commercial studio centres where rival broadcasters might be working alongside each other. The access rights feature can be used to lock facilities, ensuring that clients will not be able to log into a competitor's suite.

Diveemo exploits the long range of DRM, the digital radio equivalent of AM broadcasting. Video is encoded in the H.264 advanced MPEG4 compression format and audio as HE-AAC (high efficiency advanced audio coding). One or more audio streams can be carried alongside the video, meaning Diveemo can carry sound-tracks in several languages.

So, just a few highlights of what sound is offering during IBC 2010. And there will be plenty of embedded audio – Axon is launching its G3D100 – 3Gb/s, HD, SD stereoscopic production and transmission system, with full embedding capability – all we have to do is ignore the video around it, even if that is in 3D.

"IT has had a dramatic influence on the development of professional broadcast equipment over the past ten years. With the introduction of products like H2O that shows no sign of changing."

H²O, But Not As We Know It...

IT has had a dramatic influence on the development of professional broadcast equipment over the past ten years. With the introduction of products like H²O that shows no sign of changing. Back in 2001 Trilogy Broadcast introduced what is generally considered the first IP-based intercom system, the Mercury.

Nine years on and the next phase will be shown at IBC; Gemini, like its forebear, is a distributed peer-to-peer system, which gives flexibility in where matrices can be positioned. It has what is claimed to be the first touch-screen front panel for intercom, showing status and configuration settings. Other features include support for up to 32 traditional and IP-connected intercom units, telephones, and other equipment such as phones and radio using the Session Initiation Protocol (SIP) standard.

It Just Gets Everywhere!

Proof that video gets everywhere can be had on the Fraunhofer and Thomson Broadcast & Multimedia stands. The German research institute and the French media conglomerate, along with NewStar Electronics, have developed technology for low bit-rate video services to be carried with Digital Radio Mondiale (DRM) signals.

When Worlds Collide

TIM GOODYER talks unheard-of studio activities with Cookie Marenco.

It is telling that The Valence Project chose the California Audio Show to launch its new recording project. The San Francisco show's agenda of assembling "exhibitors showing budget-priced equipment that scream value, and others with price tags that make your jaw drop" neatly reflects the project's diversity of talent and output.

Held at the tail-end of July, the show also offered a platform for producers and artists to discuss recording techniques and answer questions. Among them, were The Valence Project's violin improvisation virtuoso Emily Palen and Valence Records label founder, Gregory James – who both recorded live to the Internet during the show.

The Valence Project has its roots with Grammy-nominated producer Cookie Marenco and drummer/beatmaster looper Brain, who took their studio collaboration with a strong cast of 'extraordinary artists' to Valence Records in search of release. Initially, they proposed remixing of some of James' material, but he suggested an entire album of multi-cultural artists for the musical extravaganza.

Mix N' Match

Currently the sticks man for Guns N' Roses, Bryan 'Brain' Mantia looks after the project's drums and rhythms, while Cookie adds more than 20 years of audio experience experience of recording some of jazz's finest, as well as having worked A&R for Windham Hill. In addition, Marenco's work with Liquid Audio positioned her to be the first engineer to record the first paid live performance download. Her recently launched Blue Coast Records label (founded with Jean Claude Reynaud), meanwhile, has become a standard in acoustic music recording using a a proprietary recording technique called ESE (Extended Sound Environment).

Then there is a cast of musicians that includes Garaj Mahal bassist Kai Eckhardt, sax/flautist Baron Shul, Irish blues Hammond organist/keys player Eamonn Flynn, composer/producer/performer Melissa Reese and many other talented performers including James on guitar. The result suggests elements of Prince, Radiohead, Zero Seven, and Jeff Beck in a melée that spans everything from electronica and pop to meditative freeform dance.

"It's trip-hop meets funk pop with a twist of performance art," Cookie counters. "Gregory James is a long-time associate that I've produced many records with over the past decade, though mostly in contemporary jazz. Greg's willingness to expand his label's sound opened up a unique opportunity for me to work with another long-time associate, Bryan Mantia.

"I recorded Brain's first demo as a drummer with the Limbomaniacs back in the 1980s," she continues. "Since then, he's gone on to be drummer for Primus and the latest incarnation of Guns N' Roses. In between, he's worked with Tom Waits, Bernie Worell, Chris Isaacs, Godflesh, and many of my acoustic projects ranging from bluegrass to children's music, and a women's A Capella choir. He's also brought me in on some very special projects with Buckethead and Bill Laswell, in a band called Praxis. The breadth of Brain's musical understanding is amazing. That, combined with an extraordinary gift as a drummer make collaboration heaven."

The project's press calls Cookie and Brain's use of analogue and digital media in one project 'unlikely'. "We thought it would be a fun challenge," Cookie says, easily. "Brain was going on a G n' R tour, so we had to lay the grooves down before the songs were written."

Studio Surgery

"As Brain was getting ready to tour we had limited time, so we came up with some unusual methods of working," she explains. "Because I prefer working on tape, it added to the complexity, but we more than made up for that in sound and ease of recording live instruments. We worked at my OTR Studios set-up in San Francisco, which is now the oldest original owner operated studio within the San Francisco area. There is an OTR Studios in England, also, not to confuse the two…"

OTR specialises in recording acoustic instruments to the highest quality. This calls on vintage microphones and Millennia Media, Neve and Manley preamps, recording to two-inch analogue tape and DSD (direct stream digital/1-bit recording) systems using home-grown silver/copper cable. "While we have Pro Tools and Samplitude, people frequently come to us to record their bands live using our 1885 Steinway piano, mixing using analogue outboard gear or dynamic mastering," Cookie explains.

Using tape saturation, destructive plug-ins, vintage effects, and spontaneous jamming – the equivalent of an audio blender – Brain and Cookie were in their element, with Brain putting hours of drum beats onto analogue tape. "Nothing beats the sound of tape and analogue effects,' Cookie says. "After that, we moved it onto the digital systems, and cut it up and looped it into musical compositions."

With the song forms in place, the music was transferred back to tape for bassist Eckhardt to record the chord foundation. Melissa Reese, Gregory James, and new vocalist/composer/performance artist Deborah Charles added lyrics, and recorded their performances to tape. Further refinements of the music brought Brain in for Pro Tools and Logic editing, and then it went back to tape for keyboardist Eamonn Flynn, bassist Jonathan Herrera, woodwind player Baron Shul, and violin sensation, Emily Palen (a YouTube star with 1.2 million views). The final touches were provided by Gregory James' guitar, and mixing was done to Direct Stream Digital (DSD), a format that Marenco feels surpasses the usual PCM digital and most resembles analogue tape.

"We were doing things in the studio I would have fired anyone on the spot for otherwise!" Cookie says. 'To Valence Records credit, we were allowed maximum creativity – unheard of, if you're a hired gun engineer, producer, or session player."

Presently available as both CD Quality and 96kHz high-resolution downloads, the results have been well received by the dance community. DJs have started to remix the grooves for clubs (Valence Records encourages it), and you can find remixes of the first single, *Who Do You Love*, by several artists from the band and well-known DJs.

The CD release is set for later in the year, along with DSD downloads. AM

INFORMATION

www.thevalenceproject.com
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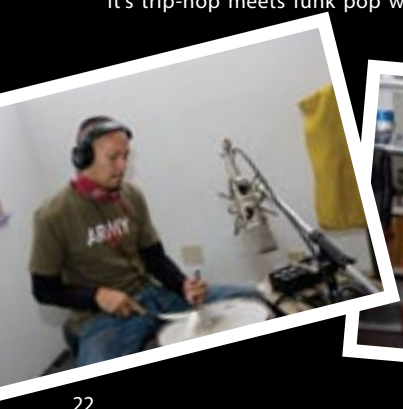

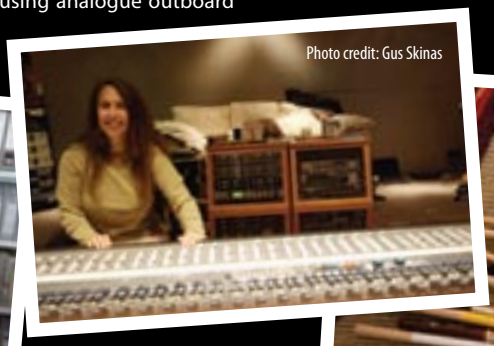

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RSS S-0808 & S-4000M

REAC Stage Box & Merge

ALISTAIR McGHEE finds the S-0808 and S-4000M by RSS brings a new level of flexibility to its digital snake range.

"Ah, the good old days," I thought as I watched my wife drag a drum of multi to the van. The traditional copper multi-core has outlived many a technology. Old before CDs were born, the heavy-duty cable with a bundle of twisted pairs has served live and broadcasting for a long, long time. It's not that we haven't tried to replace it, I think in BBC Wales we have digital 'multis' from Otari, RME, Yamaha, and RSS. It's not through want of trying. It's just the multi is hard to kill. Of course, alongside this cavalcade of manufacturers there's a plethora of formats. MADI, Ethersound, Cobranet, ACE, Audiorail, and Brikworm to name but a few.

Out On The Pitch

RSS has been pitching hard with its REAC digital snake and we've been using it for a couple of years now. In conjunction with REAC enabled mixing desks, RSS is building a comprehensive solution to venue audio transport. It started with the 40-channel 4000 series, usually configured (the stage box takes plug in cards for flexible options) as 32 remote control mic preamps and eight outputs at the stage end. Next came the 1608 series with stage boxes offering 16 in and eight out, and the reverse for the mix position (or plug the Cat5e straight into a RSS desk with REAC).

In the new S-0808 and S-4000M products RSS has brought a new level of flexibility to its digital snake range. The new system offers better stage coverage. One enormous stage box is all very well, but cabling everything back to one central point can be difficult, messy, and dangerous. So deploying the S-4000M in its merge mode will allow you to combine up to four REAC stage boxes into one REAC stream.

The S-4000M merge box is a surprisingly large box (why so big RSS? Well I say 'big', it's not heavy and about the size of a large shoe box, it's just that we live in miniature world now) offering four inputs and one merged output. The S-4000M also has an onboard nine-pin serial port (where did I put that USB to nine-pin cable?) allowing full control of the attached boxes using RSS's free downloadable editor. The software runs on PC or Mac. I used the PC version and it is simplicity itself after you have connected to the port. Once configured, the boxes retain their settings through a power down. Interestingly a power down or cable reconnect will be overcome in under ten seconds, which is pretty good. You can attach any mix of RSS's range of REAC stage boxes and this could be up to 160 inputs. The merged output can only carry 40 channels (REAC specification), but the software control means you can pick from any of the 160 inputs.

Ah, you're thinking, wouldn't it be good if I had a smaller stage box to take advantage of this new flexibility? Well that's exactly what the S-0808 is, an eight in/eight out box with the added bonus of escaping from the tyranny of mains power.

Where's The Socket?

One of the reasons the old style multi is so useful is that you don't need to plug it into the wall. Of course at most gigs power isn't a problem – but it's rarely convenient, and it's always extra wiring and one more thing that can take out your gig when you least expect it. So the S-0808 offers two modes of power, 12V dc from a battery on a standard four pin XLR or embedded power down the REAC cable conforming to standard power over Ethernet conventions. Each of the four inputs (but not the merged output) of an S-4000M offers REAC power.

And it's worth, I suppose, digressing here into the thorny thickets of standards versus proprietary systems. RSS has made the S-0808 compliant with standard power over Ethernet systems. This means you can use a standard PoE injector to power your stage box. However, compatibility limits the amount of current you can demand down the cable and that limits the number of mic amps you can run. Hence the eight-channel limit, and also the fact that you can't daisy chain the boxes. Talking of standards, RSS supplies a V-lock mounting plate that allows the secure attachment of any battery system with a V-lock connector. With this option you can run an S-0808 based snake from DC only. The S-0808 consumes about 25W, so do the maths on your battery.

When it comes to REAC power the S-4000M has a very neat trick up its sleeve, a mode that powers four boxes in two independent REAC chains. In this mode configuration of the end boxes is not possible at the S-4000M serial port, but it's business as usual at the nine pins on the boxes. The S-0808 offers eight XLR balanced mic inputs, inputs 5 and 6 also offer balanced jack sockets, and 7 and 8 are switchable high impedance for guitars. All in all, a flexible package.

Is it the end of the multi? No. A digital snake with remote preamps and software control is so obviously a different thing that there's room in the world for both. When you enter Ethernet cabling world, be prepared. I would advise buying RSS's own cable. Cat5e cable is ubiquitous and that's great, but we have had occasional problems with other brand cables – and try not to get the end wet. In fact that's good advice for audio generally.

Definition Of Flexibility

In conclusion, flexibility kind of defines the REAC range. Three stage boxes, three mixers (a new smaller mixer on the way as we speak), MADI bridge, battery and PoE powering options, software control, remote control, and personal mixer control. There's something for everyone and RSS is obviously committed for the long haul. Just as well when you think how long a multi lasts.

INFORMATION

£ **S-0808 – GB£1,099.00 (exc.VAT)**
S-4000M – GB£1,299.00 (exc.VAT)

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THE REVIEWER

ALISTAIR McGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.

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STEPHEN BENNETT has a first look at the console that promises all of its bigger brother's quality and processing power in a smaller, more affordable package.

product preview

DIGICO SD9

Digital Mixing System

DiGiCo's decision to utilise the Super Field Programmable Gate Array (S-FPGA) as the centrepiece of its SD7 (reviewed in *Audio Media* issue 209, April 2008) has certainly paid off in the long run, as the processor is also at the heart of the company's SD8 (reviewed in issue 218, January 2009) and is also embedded in the subject of this preview – the affordable SD9. The processor forms the bedrock of the company's 'Stealth' technology – which isn't just another case of product-speak jargon, as David Webster, DiGiCo's Marketing Director is at pains to point out. "On DSP-based devices, if you want to create a stereo channel you lose a mono channel. So if you have a 48-channel desk, creating 12 stereo channels reduces this channel count to 24. The way our Super FGPA-based Stealth technology works is that creating a stereo channel doesn't double the processing cost; it's very good at doing mundane tasks, if you like. These are what we call flexi channels – I know that it sound like a marketing thing, but if you look at it in the real world, 40 channels on an SD9 is effectively the same as 80 channels on a DSP-based console at the same price point."

All In The Detail

Although the SD9 sports less features and smaller dimensions than its more expensive stablemates, Webster says that it retains the important details that have made the SD series such a success for the company. "It has fewer facilities than the SD7 and SD8 in terms of input and output channels but, even though it's significantly less in terms of price than an SD7, it doesn't have that many restrictions on channels and busses. So if you look at it in terms of the competition at the same price point, it has significantly more facilities. Some of our competitors may have 16 busses; but they won't be the same as our flexi busses so they can't, for example, do 16 in-ear stereo mixes – they'd only be able to do eight."

It's obvious why a company like DiGiCo might want to bring the technology of its more expensive consoles to a lower price point, as customers who can't afford, or don't need, all the facilities of the SD7 can take advantage of Stealth technology. "The Killers, who are obviously a very successful band and who are usually out doing big shows with a correspondingly big budget, use the SD7," says Webster. "But Brandon Flowers (frontman with the Killers) is out doing a lower profile solo promo tour – but he wants the same quality as he gets when he's touring with the band. So he has an SD8 front of house and an SD9 on monitors. He's used to having an SD7 but he's totally happy with the sound quality of these lower cost consoles."

No Quality Cuts

When companies design products to a price, they often lose some of the qualities that make the original so desirable – but not so the SD9, according to Webster. "What's important is what the SD9 has that is exactly same as the SD7. With many products, when you have a more cost effective version you lose something as to how it looks or the quality of the faders and knobs or, worst of all, audio quality. What we've managed to do is retain Stealth processing by using the same Super FGPA processors from the higher cost consoles. We're currently the only manufacturer using this technology that we introduced in 2007 with the SD7. Exactly the same technology is used in the SD8 and SD9. Super FGPA is a lot more cost effective than using specialised DSP, and it means we can significantly bring down the price of a product without sacrificing audio quality. So whether you are using an SD7 or SD9 they are sonically the same – the sound remains the same."

While other manufacturers feature FGPA processors in their consoles, it's used in an entirely different way in DiGiCo's designs. "Other manufacturers (and DiGiCo's own D-series) use FGPAs as a kind of 'glue logic' – they are used to make several chips, such as Analog Devices' SHARC processors, appear as a single, more powerful chip. In the SD series, each of our consoles basically sports a single chip S-FGPA processor," says Webster. "We are still the only manufacturer currently using Super FGPA in this fashion. Sonic quality is obviously important to the company, and creating the shortest distance between the microphone preamp and the microphone, by using on stage inputs and preamps, is retained from the SD7. "Getting the microphone preamp right is one of the most important things with respect to audio quality and if you don't get a good sound going in, it doesn't matter what you do with it afterwards, it will still sound rubbish – rubbish in, rubbish out!" laughs Webster. "There are two advantages with digital; one is having snapshots (which all digital consoles have) and the other is reducing the distance between preamp and microphone. The SD9 has the same sonic quality as the more expensive SD boards, and we haven't put the microphone preamps on the back of the console– they are still on stage."

Conclusion

The power inherent in the FGPA processor has allowed DiGiCo to expand its range of SD console facilities with tweaks and upgrades, such as 'Mach 2' (reviewed in *Audio Media* issue 222, May 2009). This included a huge number of enhancements, such as dynamic EQ and multi-band compressors being accessible on all 256 processing paths. These enhancements have already made their way into the SD9, as will any that are developed in the future. "As we learn to exploit the power of the Super FGPA processors benefits will be added to all consoles in the line," says Webster.

The SD9 brings the sonic quality, flexibility, and sheer processing power of DiGiCo's higher level consoles into a new more affordable compact package – which should bring a smile to the faces of engineers – whatever their chosen field. AM

INFORMATION

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THE REVIEWER

STEPHEN BENNETT has been involved in music production for over 25 years. Now based in Norwich he splits his time between writing books and articles on music technology, running his own Chaos studios and working in the Electroacoustic Studios in the School of Music at the University of East Anglia. He's also a filmmaker with several music videos and short films to his credit. www.stephenjamesbennett.co.uk

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product preview

SOUNDCRAFT VI1

Live Mixing Console

The baby of Soundcraft's Vi family inherits all the features that made the earlier consoles a success, but with a more analogue-feel, says STEPHEN BENNETT.

Soundcraft's Vi6 console, (reviewed in *Audio Media*, March 2006) is the company's large format live console and is part of a range of Analog Devices' SHARC–based desks that include the smaller Vi4 and the subject of this preview, the Vi1. All consoles feature Soundcraft's innovative Vistonics screen-based channel strip interface and Fader Glow technology that the company believes makes its products class leaders in ergonomic design. Featuring masses of inputs, outputs, and DSP-based processing options, the Vi4 and Vi6 are still pretty physically large consoles with their extensive fader banks and external processing racks, so Soundcraft's new baby, the Vi1, is designed to bring the advantages of the other desks in the Vi series to a more affordable, and compact, level.

Big On A Budget

"After we had released the bigger Vi consoles, the challenge was then to produce a lower priced model in the range," says Andy Brown, Director of Digital Strategy for the original Vistonics Soundcraft Studer. "To do this we retained, but changed, the Vistonic screen operation – which is the main feature that makes this series of consoles unique." Soundcraft's Vistonics features banks of encoder knobs floating on a glass screen in conjunction with touch screen operation to access the desk's channel strips. "We re-engineered a new version, which we call Widescreen Vistonics™," says Brown. " So instead of having the four or five screens of the Vi4 or Vi6, we have a large widescreen one that we divide into sections and which forms the equivalent of four Vistonics screens on the other products – and which makes it obviously more cost effective to produce."

The advantage of having facilities working in the same fashion on all the consoles in the same range is something Brown is keen to stress. "We've come up with what we think is a really nice idea of keeping the same operational concept of the other Vi desks on this new model and screen. The result is that you have a row of 16 encoders (the same number as the Vi6, but laid out differently), so anyone who has used the Vi6 will be able to operate the Vi1 and vice versa. Soundcraft's Fader Glow technology, which allows the user to easily see what their faders are in, whether they are controlling inputs, aux, or effects sends or buss outputs, for example, has been incorporated alongside Vistonics to enhance the familiar feeling of any engineers coming anew to the Vi1 from other Vi series consoles. The Vi1 also features the same Lexicon effects as the other Vi consoles, though reduced in number, and this adds to this feeling of familiarity.

"The ability to control channel strip parameters and the ease of use of the Vistonics feature for new users is probably the biggest plus point we hear people commenting on the Vi series," says Brown. "They say that it closely resembles a comfortable analogue control surface – and we've retained that feeling on the Vi1." Though ergonomics are of vital importance to both Soundcraft and the end user, the company says that they haven't sacrificed audio quality when reducing the cost, as Brown explains. "The other thing that is always mentioned by users is the high audio quality of the Vi series. We're using the Studer DSP technology, which is 40-bit floating point and which was originally developed for its high end broadcast consoles. We haven't compromised that at all – we've used the same technology on the Vi1. Because it's a desk designed for live use, where the desk could be used by a large number of different freelance engineers, our original design brief with the Vi range was to make a console that was as uncluttered as possible and immediate to understand when you haven't had any training – and again, we've maintained that on the new Vi1."

Spot The Difference

So, while the audio quality remains the same as the more expensive consoles, Brown explains exactly what the differences are between the Vi1 and the others in the Vi range. "The Vi1 uses same the base operating system, which means that a lot of the features are found on all of the consoles in the series. Obviously, the feature set is somewhat cut down for the lower priced Vi1, so you have fewer channels, busses, faders, and so on. But under the audio hood we've used the same technology as the more expensive designs. We've also developed a way of building the desk's processing core directly inside the console – the Vi4 and Vi6 both have a large separate processing rack containing the DSP core and the local ins and outs. With the Vi1, we've combined these inside the same frame as the control surface – though you can still have the option of a stage box, which is a feature standard on the Vi6. We still retain an element of the ability to choose various types of input/output connective options – all of which are compatible with the Studer D21m I/O system's range of cards for its broadcast consoles and on which the Vi6 is also based."

Conclusion

Brown sees the Vi1 appealing to the same kind of people who've bought and used the Vi4 and Vi6, but who are looking for a more cost effective and compact solution that doesn't compromise too much on features and not at all on sound quality. By retaining the features that made the earlier Vi consoles a hit with engineers, the Vi1 should find favour with those who miss the immediacy and feel of traditional analogue consoles, which is so often absent from today's power-rich digital desks.

INFORMATION

£ GB£14,950.00 (exc.VAT)

Ⓐ Soundcraft Studer, Cranborne House, Cranborne Road, Potters Bar, Herts, EN6 3JN
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Ⓦ www.soundcraft.com

Ⓐ UK Distributor: Sound Technology, Letchworth Point, Letchworth, SG6 1ND, UK
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THE REVIEWER

STEPHEN BENNETT has been involved in music production for over 25 years. Now based in Norwich he splits his time between writing books and articles on music technology, running his own Chaos studios and working in the Electroacoustic Studios in the School of Music at the University of East Anglia. He's also a filmmaker with several music videos and short films to his credit. www.stephenjamesbennett.co.uk

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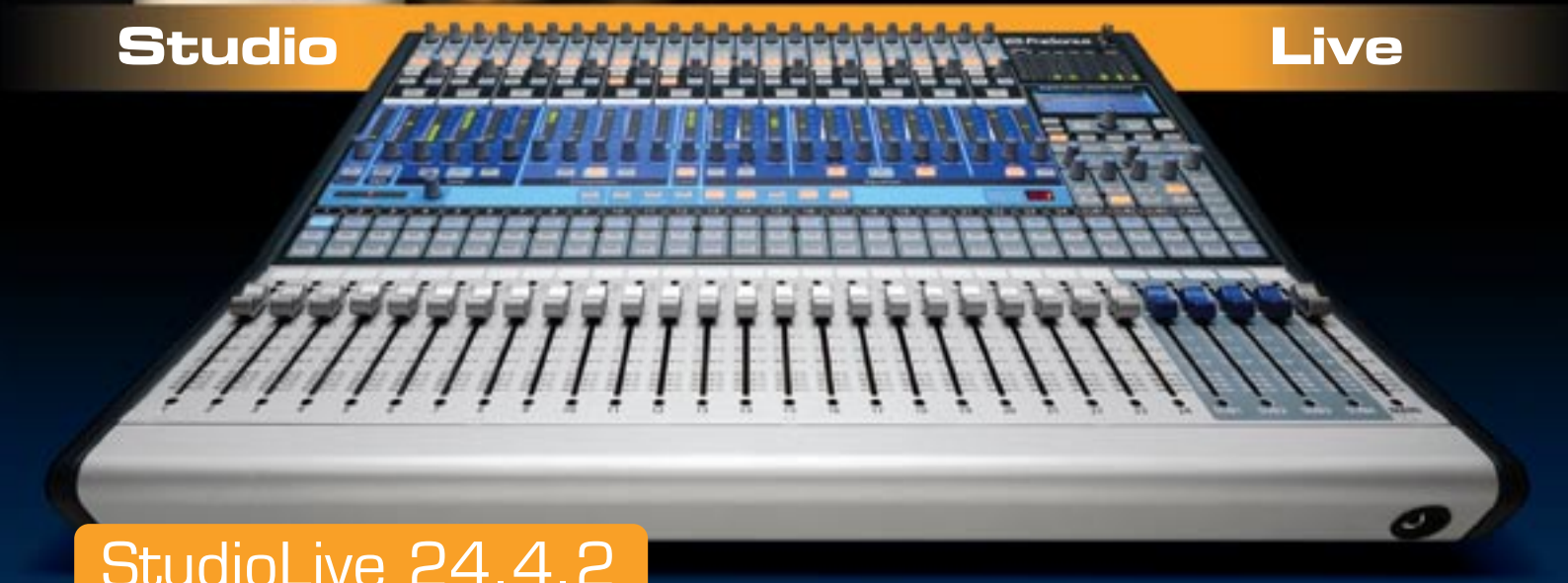

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The remote-controllable Model 188 is a flexible, multi-channel mic preamp built to serve many masters, says STROTHER BULLINS.

Aphex is a company generally known for building products that reside in professional studio and live-sound racks for years and years, simply working as dependable tools without drawing too much attention to themselves.

The Model 188 eight-channel, remote-controllable microphone preamplifier with built-in A/D conversion will perpetuate that reputation, and at a price that should attract the attention of no-nonsense audio folks.

APHEX MODEL 188

Eight-Channel Microphone Preamp

Features

Housed in a 1U rackmount chassis, the Model 188 offers eight mic preamps with a two-line LED display and simple turn/push data entry knob on the front panel, and all I/O on the back panel: left to right, IEC power jack, Ethernet jack for remote control, word clock sync via two BNC connectors, two ADAT/Lightpipe outputs, a DB-25 connector providing eight channels of balanced analogUE output, and eight XLR mic inputs.

The Model 188's mic preamps offer 65dB of total gain with 26dB fixed gain (39dB variable gain). A 26dB pad, polarity reverse, and low-cut filter at 80Hz is provided per channel. The Model 188 supports 44.1, 48, 88.2, and 96kHz sample rates; automatic ADAT SMUX output is available for 88.2 and 96kHz, with selectable SMUX for 44.1 and 48kHz.

The most notable feature of the Model 188 is its remote-control capability. Like the Aphex 1788A – a well respected eight-channel mic amp that can be found in high-end mobile recording rigs around the world – the Model 188 can be remote-controlled via Ethernet or MIDI via the Aphex 1788-RC hardware remote, AVID Pro Tools, or – as I utilised it – the free-to-download 1788SW control software for PC and Mac.

In Use

I used the Model 188 over the span of six months in a variety of settings: numerous tracking dates on the gamut of acoustic instruments, drums and percussion, vocal, and miked cabinet applications with a wide variety of microphones as well as a 'crucial input mic amp' for two live events via remote control with my Mac Book Pro running the 1788SW control software. First and foremost, the Model 188 mic amps are pristine, providing lots of clean gain, and they offer all the adjustable parameters you'll generally need.

Sans software – with the Model 188 sitting at your monitoring station – it's easy to adjust eight microphones of input in a flash; the push/turn parameter adjustment scheme of the unit's singular knob is brilliantly simple. Once you get the hang of it, it's easy to dial in appropriate settings for, say, a full drum kit in a jiffy. The back panel is well laid out, with all digital I/O to the left and all analogue I/O to the right. I'm a big fan of the DB-25 outputs, as it's really easy to swap those connectors around, especially in time restrictive settings, such as location recording and live work. The 1788SW software is incredibly intuitive, closely resembling the 1788RC hardware remote, and there's virtually no learning curve to figuring it out.

It's simple to download and install; any user of such a product as the Model 188 should be up and running with it in no time.

Summary

The Model 188 is not sexy from a visual or operational standpoint. For that reason, I find it important to say that it is an incredibly solid multi-channel microphone preamp, maybe even the best example of what is a 'pro audio workhorse'. It's neither low-end or too high-end/esoteric to not be a wise investment for anyone who takes audio seriously (and hopes to be taken seriously as a professional or an aspiring pro); it's the kind of product that could be your first pro-grade eight-channel mic preamp and reside in your rack throughout your entire career, as Aphex is well known for making products that simply last.

INFORMATION

£ GB£1,280.00 (exc.VAT)

Ⓐ Aphex
10068 Randall Street, Sun Valley, CA 91352, USA
Ⓦ www.aphex.com

Ⓐ UK Distributor: SCV London, 40 Chigwell Lane, Oakwood Industrial Estate, Loughton, Essex, IG10 3NY
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Ⓦ www.scvlondon.co.uk
Ⓔ sales@scvlondon.co.uk

THE REVIEWER

STROTHER BULLINS is Editor of *Pro Audio Review* magazine.

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Focus on functionality — the new mc²66.

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MIC W N201

Condenser Microphone

Could the N201 be the mic to cast aside negative Chinese stereotypes of low-quality manufacture? SIMON TILLBROOK thinks it very well could…

THE REVIEWER

SIMON TILLBROOK is the Principal Music Tutor at Islington Music Workshop in London. The rest of his time is spent as a freelance engineer, mainly in the USA.

I have just received a small sturdy plastic carry box with the name MicW on the top containing a pair of small microphones. A little investigation into the name informed me that these microphones had come from a Chinese company called BSWA Technology who has been based in Beijing since 1998.

The company has been involved in producing precision test equipment, including test and calibration microphones, for other manufacturers for many years. This experience has led the company to produce its own range of high-end microphones under the brand MicW.

Overview

In the case, we have a pair of MicW N201 omni-directional condenser microphones.

Although you can purchase these microphones individually, here we have a matched pair for stereo use. MicW says that the microphones supplied in this paired form match within 0.5dB in sensitivity and phase match within five degrees.

Each N201 is individually calibrated for use as a measurement microphone meeting IEC61672 Class 1 standards, and goes through a high temperature ageing process to give long-term reliability and stability.

The N201 has a 12.7mm capsule at the end of the familiar looking 155mm long pen style body. It has a low inherent noise level of 18dB (A-weighted) and a frequency response of 20Hz-20kHz, with a slight 2-3dB lift peaking at around 10kHz. The N201 can withstand a maximum SPL of 130dB with less than one percent total harmonic distortion.

There are a number of accessories that you can use with the N201. None of these were available to me during testing, but they include windshields, capsule protectors, and modifiers. These modifiers alter the acoustic qualities of the microphone in terms of high and low frequency response along with the polar pattern.

Use

I was supplied with a matched pair of N201 microphones and a pair of microphone elasticated shock mounts that the N201 simply slides into. The microphones are well built and nicely finished.

BSWA has all the in-house manufacturing and quality control facilities to maintain consistent high standards for its product lines.

The size and shape of the N201 allows for very precise positioning on instruments in a close configuration, and the shock mounts offer a very good degree of isolation from vibration within this kind of proximity.

I first used each of the N201 microphones independently within a number of acoustic environments. This is a true omni-directional microphone, maintaining a good consistent pickup around the entire microphone capsule. Even towards the rear, the colouration is very slight indeed.

The clarity of the N201 is very noticeable and has an open, airy, crystal clear sonic pick up that is highly detailed

without any harshness at all. There was absolutely no noise to speak of, the mic was wonderfully transparent reflecting the true nature of the space. This is not a microphone that exhibits any specific character. The MicW N201 simply delivers exactly what you hear standing in the space, and there are plenty of applications where that is precisely what you need.

The two N201 microphones were impossible to identify individually, even under close scrutiny by a number of colleagues, so consistency of manufacture and matching are very good indeed based on these examples.

The applications where I used the N201 for stereo recordings delivered lovely full, rich results. An orchestral recording in a concert hall really came to life with this set-up, as did various ambient drum and percussion sessions, both in studio and on location in some larger, more reflective spaces. The detail in the high frequencies was very satisfying indeed.

Closer miking of acoustic guitar was just as rewarding. This trend continued through all of the instrumental examples with which I was able to use the N201, both in close and distant scenarios.

It would have been nice to try the microphones with some of the accessories to see what else the MicW N201 is capable of and to extend the possible applications. The windshields will need to be very good to allow for outside use of the N201, and having the ability to manipulate the pickup pattern and the slight changes to the sonic qualities would make these microphones very flexible and more attractive to a diverse user base.

Conclusion

For my first experience of microphones from MicW, the N201 is superbly transparent. The lack of sonic signature is one of the main advantages and attractions.

The N201 never failed to deliver when tight to the source but, when allowed to take in the array of nuances within an acoustic space, it really came to life.

For neutral clarity of sound capture, the MicW N201 should be on your short list for testing.

INFORMATION

Ⓕ **GB£637.20 (exc.VAT), Matched Pair: GB£1,370.40 (exc.VAT)**
Ⓐ **MicW Audio Unit 1003, North Ring Center, No.18 Yumin Road, Xicheng District, Beijing 100029, China**
Ⓣ **+86 10 5128 5118**
Ⓦ **www.mic-w.com**
Ⓔ **sales@mic-w.com**

Ⓐ **UK Distributor: eMerging Ltd., St Clare House, Holly Road, Hampton Hill, Middlesex, TW12 1QQ**
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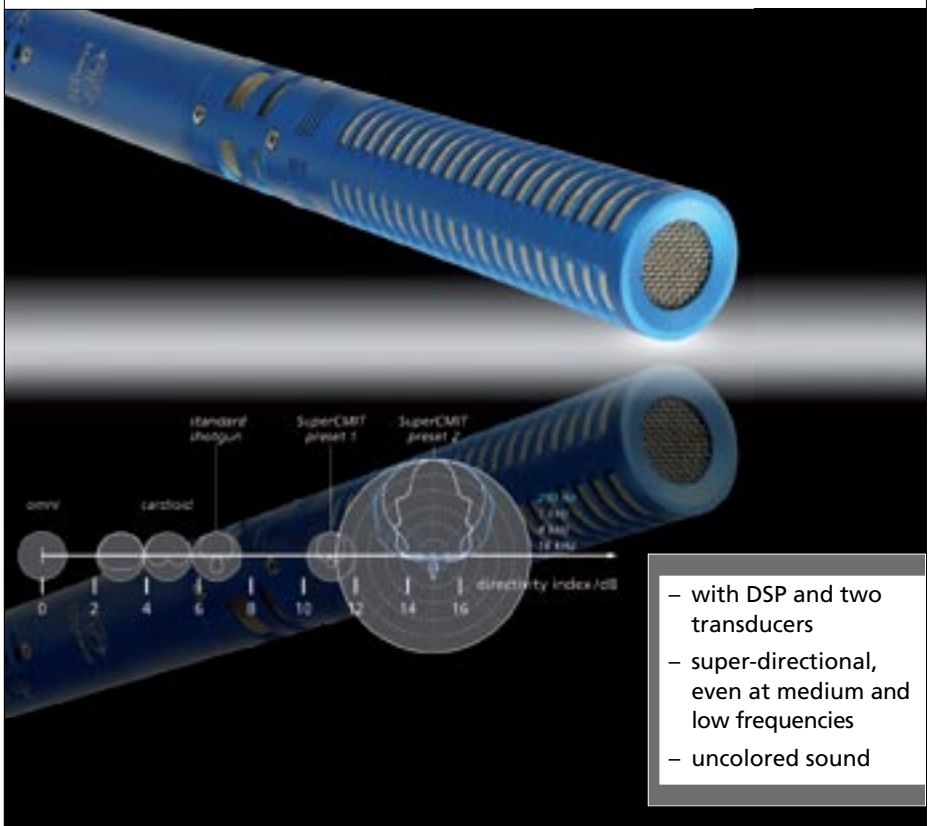

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SONODYNE SM 50AK

Studio Monitor

A name not often heard of, but one that shouldn't be so easily dismissed. SIMON TILLBROOK thinks you might just find the SM 50AK suits your needs perfectly.

I have to admit that I am somewhat unfamiliar with audio manufacturer, Sonodyne, but then again I was somewhat unaware of any pro audio manufacturer from India. A little investigation told me that Sonodyne has been manufacturing for some of the more familiar brands for some time and has recently started to put out its own branded product.

The company has full in-house design and manufacturing facilities in Kolkata to produce a range of monitoring products, the smallest in the range being the Sonodyne SM 50AK.

Overview

The Sonodyne SM 50AK is a two-way bi-amped monitor measuring a tiny 180x262x220mm and weighing in at 6.3kg. The enclosure of the weighty Sonodyne SM 50AK is a cast aluminium black painted unit with dual front slot type ports sitting either side of the tweeter. This tweeter is a magnetically shielded 26mm silk-dome unit that is ferrofluid cooled and sits in an integral waveguide. The low frequency driver is a magnetically shielded 5.25-inch Kevlar woofer.

Each of the Sonodyne SM 50AK drivers is fed by a 45W amplifier with a fourth order crossover set at 2.5kHz, and a low frequency roll off set at 60Hz with a 12dB/oct slope. The monitor, as a whole, delivers a maximum SPL of 104dB with a frequency response of 70Hz to 22kHz +-3dB.

Below the low frequency driver on the front we have a power switch with associated LED and master volume level control that, when fully turned clockwise, corresponds to 0dB.

The rear of the Sonodyne SM 50AK has an array of connections and function controls.

As well as the usual IEC power connector, the Sonodyne SM 50AK accepts input signal via either balanced XLR or balanced TRS sockets.

A related variable gain control runs from -6dBu through 0 to +6dBu. This, in combination with the front master volume, gives a good amount of flexibility when it comes to matching with other parts of your system set-up.

Next to the sensitivity gain control on the rear of the Sonodyne SM 50AK are four recessed dip switches that toggle various equalisation compensations for room placement. The first is a bass roll-off switch that when engaged rolls off 6dB per octave at 100Hz. The next two switches are described as bass tilts. When active, both enable an 80Hz filter with either a 2dB or 4dB reduction. It is

►

THE REVIEWER

SIMON TILLBROOK is the Principal Music Tutor at Islington Music Workshop in London. The rest of his time is spent as a freelance engineer, mainly in the USA.

The perfect gift
...has the ribbon inside

Almost 2 decades after revolutionising the studio condenser microphone market with the **AT4033** and **AT4050**, Audio-Technica has introduced its first ever ribbon microphones. And what's more, being part of the 40 Series, the **AT4080** and **AT4081** are also covered by Audio-Technica's unique **Lifetime Warranty**.

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possible to have both switches on together for a 6dB overall attenuation. The final dip switch on the Sonodyne SM 50AK is a high frequency tilt that employs a shelving curve reducing by 2dB above 4kHz.

Use

The first thing that hit me when I pulled the Sonodyne SM 50AK from the box was the weight of it. The monitor comes in a drawstring dust bag and, once removed, I got the impression of a solidly built speaker. The unit is well finished and very reminiscent of a small Scandinavian monitor I have used previously.

The dip switches on the rear are buried away into the casing and a small long stem screwdriver is needed to get at them. All other function controls on the Sonodyne SM 50AK are easily accessed. Nothing about the monitor feels flimsy or poorly constructed.

The review units did have a low level of background hiss, which would not affect most small workstation users, but I was a little surprised to hear that.

As you would reasonably expect from such a compact monitor, the low frequency delivery of the Sonodyne SM 50AK was a little limited, though tight and clear. Sonodyne does have a subwoofer in its studio monitor range principally for use in a surround set-up, but is not limited to this, so you could add this ten-inch driver unit to your system if you wished.

The high-end was clean and open with a good level of detail without any brittle edge to the overall sound.

Clarity and imaging in the midrange was generally good for a monitor of this size.

This area of the Sonodyne SM 50AK delivery is most prone to colouration when it comes to angle and general position within the room.

The various dip switches on the rear of the Sonodyne SM 50AK are very effective and it is essential to take the time to tailor the set-up for your room to get the best from the monitor setup. The reward for doing this gives you excellent mid clarity and imaging.

The clarity and tightness are quite affected when you push the volume level of the monitors though it is only apparent when close to capacity, beyond what I would expect most users to be running them at.

Conclusion

The Sonodyne SM 50AK is in one of the most competitive areas of the pro audio market – that of small, active studio monitors, and is a good example of such.

At its price point, I cannot say that it stands head and shoulders above the competition, but it certainly holds its own alongside the many alternatives.

Sonodyne is not a name many are familiar with and it would be easy for you to dismiss it out of hand because of this. I would encourage you to give the Sonodyne SM 50AK a try when you are auditioning for a small monitor. It may well be the one that suits your needs.

INFORMATION

£ GB£349.00 per unit (inc.VAT)
Ⓐ Sonodyne
Ⓦ www.sonodyne.com

Ⓐ UK Distributor: The Audio Pros Ltd., Unit 65 The Wenta Business Centre, Colne Way, Watford, Herts, WD24 7ND, UK
Ⓣ +44 (0) 1923 693770
Ⓦ www.audiopros.eu
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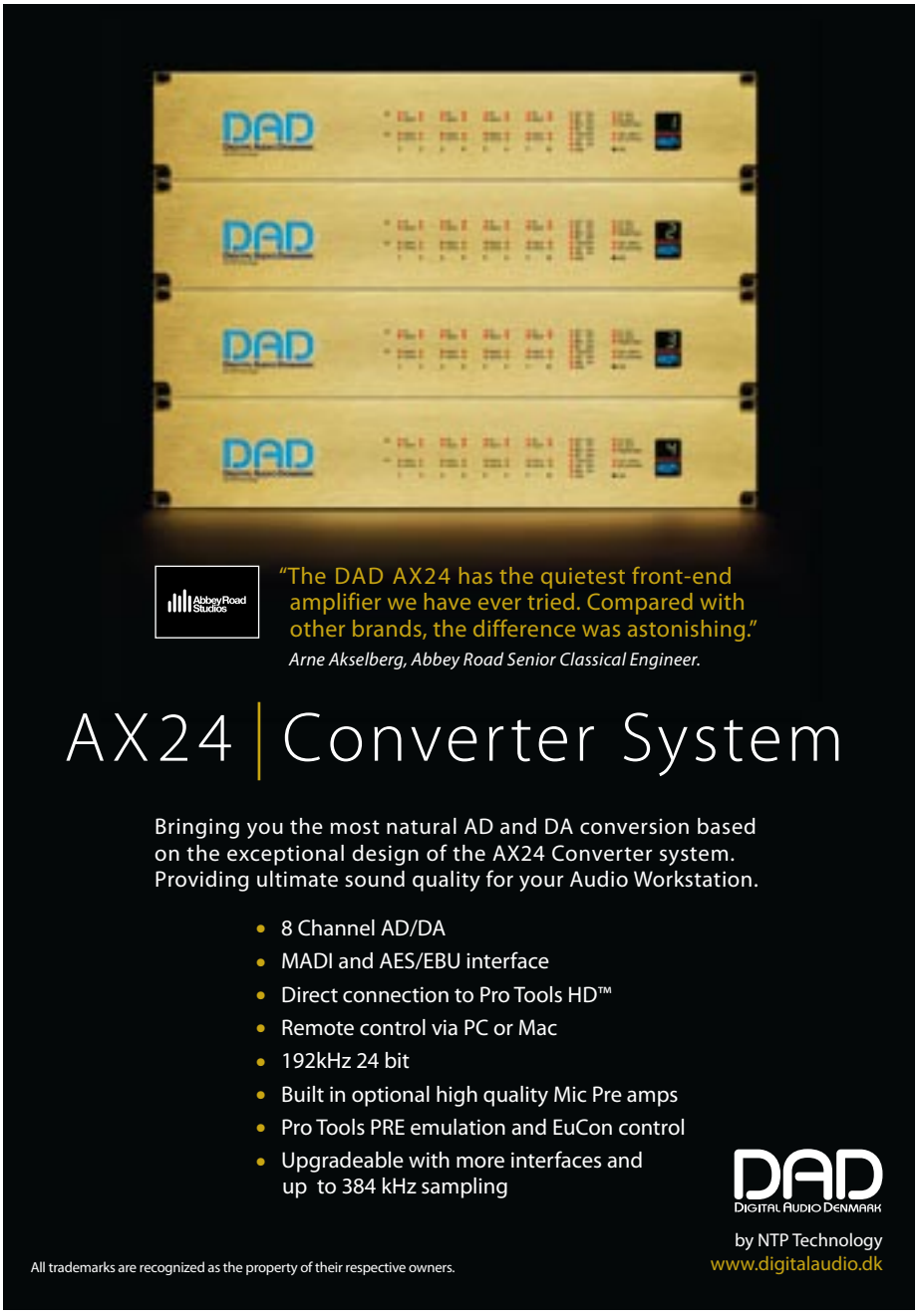


Scott Pilgrim vs The World

PAUL MAC goes to the newly refurbished De Lane Lea studios in London to talk to three of those responsible for what could be one of the most adventurous mainstream film sound experiences of the year.

The buzz surrounding *Scott Pilgrim vs The World* is quite something. Take the natural credibility of an Edgar Wright movie (*Shaun Of The Dead, Hot Fuzz*), then add on comic book culture, retro gaming cool, and Nigel Godrich on music – it's absolutely guaranteed to sell, and more than likely will be as re-watchable as Wright's previous two classics.

In a nutshell, Scott falls for a girl called Ramona Flowers and ends up battling her seven evil exes. There are super-powers included, and lots of references to gaming culture - the seven exes are analogous to seven game bosses.

Given this, and much more, you'd be right in thinking that there's a wealth of opportunity for the sound department – especially with the precedent of the adventurous, clever, and rich soundtracks of *Shaun* and *Fuzz* already in place. So, there was plenty for Wright's now regular Supervising Sound Editor, Julian Slater, to get his teeth into.

Heightened Reality

Slater was Supervising Sound Editor on both *Shaun Of The Dead* and *Hot Fuzz*, so he and Wright obviously see eye-to-eye when it comes to the sonic-scape of a Wright film.

"It helps that I understand how he works. When he asks for something he quite rightly expects it to be there next time round. I know what his standards are.

"However, on this film he was quite clear early on that he didn't want it to sound like *Shaun Of The Dead* part 3 or *Hot Fuzz* part 2."

Slater describes the previous two movies as 'whoosh-tastic' ("I still think *Hot Fuzz* has more whooshes in it than any other film in history."), but explains that Scott is both a departure, and a development. "He wanted to do it with 'diegetic' sounds, which we played with a little on *Hot Fuzz*. In the pub, for example, when talking about someone being killed you hear someone in the background laughing. It has those moments in *Hot Fuzz*, but we pushed it to +20 on this film."

> "...you'd be right in thinking that there's a wealth of opportunity for the sound department – especially with the precedent of the adventurous, clever, and rich soundtracks of Shaun and Fuzz already in place."

To be more specific, diegetic sounds are defined as being sounds from real sources that are either on-screen, or there by implication. However, in *Scott vs The World*, the diegetic sounds are elevated to a more creative and artful status.

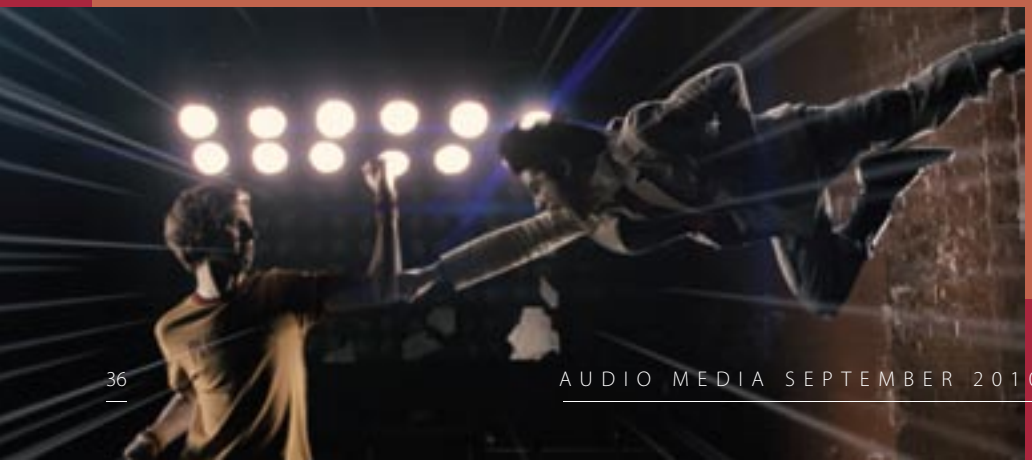
"There's a scene in a coffee shop when Envy – Scott's Ex – is saying something really slowly," explains Slater. "In the background there's a coffee machine that's hissing at the same time to make her seem sinister.

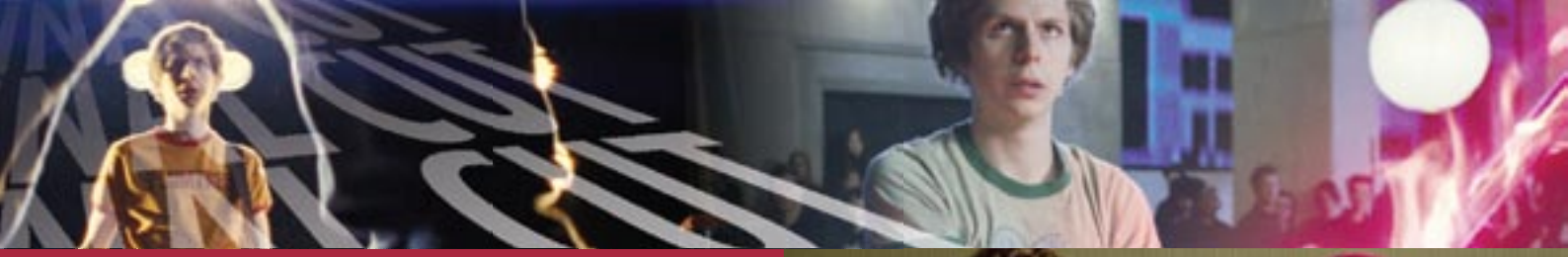
"...I've learned with Edgar that there is no such thing as a simple scene. Two people sitting in a coffee shop is not just a simple matter of laying down a coffee shop atmosphere and letting it run for two and a half minutes. There are things happening all the time, and every sound has to be there for a reason."

This all implies that Wright doesn't leave too much to chance when planning and shooting a film. Slater: "They're doing the DVD extras here at the moment and I'm doing a little bit of sound work on it. I was shown a VFX test that Edgar did two years ago... The freaky thing is that if you compare it to the film, he knew exactly what he was doing. He story-boarded everything and in his mind he had everything planned. Without a doubt he knew when he was shooting the coffee scene what he was imagining it would be for the final mix, and therefore captured it on the camera."

Early Warning System

The combination of an extremely audio-savvy Director and Slater's trusted status meant that ▸





Re-Recorders vs The World...

Chris Burden and Doug Cooper (*Kick Ass, Dust, The Boat That Rocked*) of De Lane Lea were the two re-recording mixers on *Scott Pilgrim vs The World*. Burden was responsible for dialogue and music, while Cooper took the rest...

***Scott Pilgrim vs The World* sounds like an 'unreal' challenge.**

Doug Cooper: "Ordinarily you spend a lot of time in a mix putting stuff into the room, placing it in a naturalistic way – we just didn't spend a lot of time putting it in that way. Most of the sound effects were structured to work around dialogue and around the action... So I guess the unreality of it shouldn't be overly obvious, but it should feel a bit heightened, particularly in the structure of the sounds and where they are in a scene, rather than the type of sounds that they are."

Apparently the sound started taking shape alongside the narrative?

Chris Burden: "There were two editors – Jonathan Amos and Paul Machliss. They, along with Edgar in the cutting room, produced something that was so finely tuned, in terms of the visual cut... So right from the word go, when we were doing preview mixes, there was an awareness of the choreography that we were trying to embellish."

That must be a challenge for everybody?

CB: "There was this fantastic communication between the dialogue, music, and effects departments. This film has had the greatest degree of cross-pollination from all of the departments that I've ever been involved in. Samples would appear from the dialogue, interwoven into the music... We would get a sound effect of a pulsing computer generated thing and we'd send that to Steve Price, our Music Editor. He would edit it and create a little musical sequence, then we'd run it past Edgar, tweak it, and that would become the music.

"We were also aware really early on that there were a huge number of delays used. Again, in other films you might get the odd delay thrown in, a bit of a weird effect, there's a dream sequence, and so on. We were getting the BPMs from the music to allow us to do that, and the same in the effects."

So when you talk about the rhythm of the film, it's not just a lollopping, overarching creative rhythm – this is quite tight and detailed?

CB: "Absolutely. For example, in the Roxy fight there are spinning hammers and swords and belts and everything, all whipping around the surrounds; plus there's this fantastic dance track going on."

Is Edgar Wright so fluent in sound that he can direct this kind of interplay knowledgeably?

CB: "Yes. He would know absolutely whether he just wanted to add a touch more reverb to something, or he would say 'well why don't we just try some delays on that'... Yeah. Absolutely."

That's quite special in a Director, but can it tip over into macro-management?

CB: I think there were times when we were exploring scenes a little bit as if we were in the cutting room, which was fine as long as there was time to do it. It was like both Paul Machliss and Edgar would just look at the scene, and be investigating – going on a little journey. Sometimes if you're in a final mix you're thinking about the schedule, but actually it all fitted in."

Music plays a big part in the film doesn't it?

CB: "Yes. Nigel Godrich, Radiohead's Producer, was the Music Producer and composed some of the tracks.

"There was a lot of music in terms of bands playing on stage or the equivalent going on. There's a competition running all the way through, with Scott's band trying to get through to get a record deal – another big storyline. At one point, quite close to the end of the film, they are head to head with the Katayanagi twins, and they think they're just going to go on stage and play – but no, they're playing at the same time in this auditorium. So there's that mix, then above it there are monsters that represent both bands, and they are the next level of sound.

It almost had to be the loudest thing in the film, because the whole concept is that they're going to play each other off the stage, amp vs amp – it's loud."

How do you make space in the mix?

CB: "All teams worked together. The preview was pretty good, but we just looked at it and thought, 'okay we can get a bit more space there, a bit of backing off there, use that frequency in the bass guitar that can give us a load of extra grunt on that close-up, pull back a little bit there...'"

Did you have instrument splits in the final mix?

CB: "Yes. Luckily we had little moments where we could go in and get a little close up and so on. We had some really good splits all the way through. Sometimes it doesn't work – when you're mixing something so huge, having close-up sounds can make it feel a bit smaller – so we had to be careful. But every so often there's a nice little detail."

Where do you think the sound breaks new ground or was particularly challenging?

DC: "I think it's tough to break new ground – there's a lot of good sounding films out there. We're unusual in that the tone of the film has this heightened reality, where so many of the sound effects are working to underscore the action, rather than just describing the physical locations that people are in, or their actions. I think it's quite unusual in that regard. I would say that the way it uses video game style sound effects I find really good fun... It gives it an extra reality which I think is really exciting."

sound could be considered very early on in the film's development. "He came to me well before the shoot," reports Slater. " He told me what was happening, told me the story, told me to go and buy the comic books, and gave me a DVD of references that had different computer games on, Japanese animations, and all that kind of stuff...

"I came up with eight-bit punches and game sounds that they could have while they were shooting. But me and the crew officially started whilst the director's cut was happening."

Unusually perhaps, Wright did not attend any detailed spotting sessions with the sound department. When they started, he was busy with the Director's cut. However, Slater does not see this as a problem. In fact, it plays to his own definition of the Supervising Sound Editor's role: "My job is to distill a thou-

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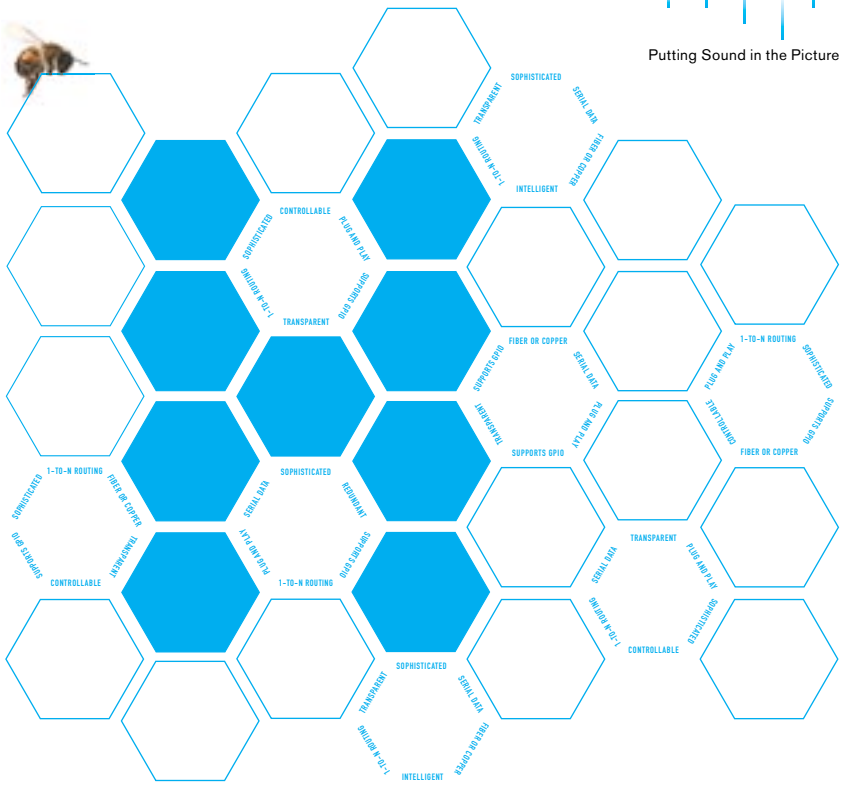

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DE LANE LEA

Scott Pilgrim vs The World was mixed in the newly refurbished Studio 1 at De Lane Lea in London. As reported in *Audio Media*, De Lane Lea suffered extensive damage due to a fire in an adjacent property. With new acoustics from Munro, new monitoring systems from Meyer, and upgraded AMS Neve consoles throughout, the revitalised studio is already making waves. We took this opportunity to ask Julian Slater, Doug Cooper, and Chris Burden what they thought of the new Studio 1...

Doug Cooper: "I think it's all sounding great, I'm really pleased. When we were temping some scenes, some of the really big scenes – the battle between the bands, and so on – they were the kind of scenes that you wouldn't really look forward to working on because they were so intense. With the new monitoring system and acoustics and the way the room's set up now, you'd go into that excited about it, because there's massive amounts of stuff going on, it sounds huge, but it never really felt aggressive... It turns them into a pleasure to work on."

Chris Burden: "The Meyers are definitely easier on the ear, which is something we've got to be very careful of in translation – how it sounds outside. Before we started those mixes we went down to Leicester Square and did some referencing backwards and forwards. I then went up to do some print checks at Pinewood, and I was really pleased with the way it translated.

"Studio 1 sounds really good. And I really am one who hates false bravado and all that stuff... The desk position helps a great deal – you get much more detail, and the surrounds are far better than they were before. The sub is fantastic."

Julian Slater: "I loved it, absolutely loved it. We mixed loud for many days... We were playing back material that I knew very well and I was hearing elements for the first time in the new theatre. It was great because of the definition and the clarity, but it was also great that I never got tired ears...

"It's probably the best sounding room in the UK. I can't imagine it's not. And they were very smart to get Dennis Leonard (*Despicable Me, Madagascar 2, Horton Hears A Who*), who is a very experienced Sound Supervisor over from the states. He came over and just made a few little tweaks. I think that was a great move.

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When asked what the biggest challenge of the movie was, Slater says that the uniqueness of the visuals presented him with the task of being unique in sound. "Even things like punches," he explains. "I wanted the punches to sound like new punches. That's a great idea, but when you try to come up with a punch that sounds new, and fits, and works, it's really hard."

"When asked what the biggest challenge of the movie was, Slater says that the uniqueness of the visuals presented him with the task of being unique in sound."

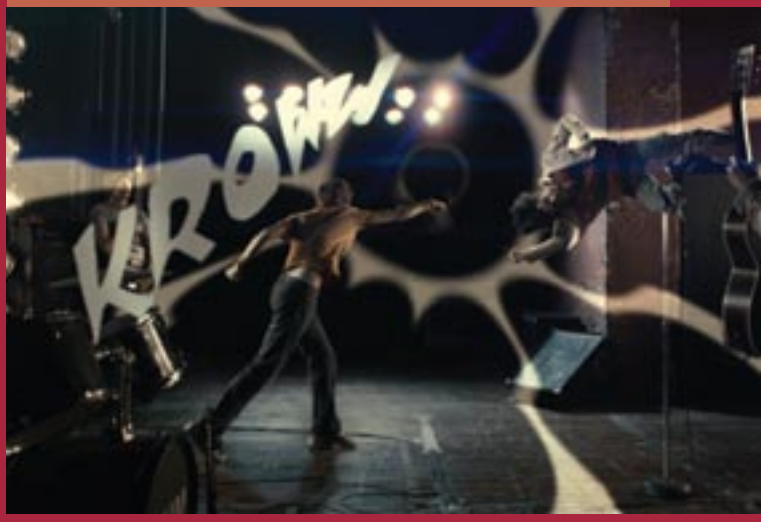
Not content with one new set of sounds, Slater set himself the challenge of finding a unique sonic palette for each of the seven evil exes: "Metaphorically, each battle is like a boss on a computer game... I wanted each battle to have its own flavour – to be unique."

Game On?

That reference to video games is an important aspect of *Scott vs The World*. Apparently there are specific adaptations from actual games, with music from *The Legend of Zelda* and sounds from *Sonic The Hedgehog* and *Super Mario Bros*. But for the most part, the retro sounds are in fact new. Actually creating eight-bit sounds was only part of the challenge (Sound Designer James Boyle bought an Atari ST and synth software especially for the occasion). The next problem was to make them work in a modern film: "The trick is making them sound cinematic," explains Slater. "So they work on a surround system... And making them work with pictures that are over the top.

"That reference to video games is an important aspect of *Scott vs The World*. Apparently there are specific adaptations from actual games, with music from *The Legend of Zelda* and sounds from *Sonic The Hedgehog* and *Super Mario Bros.*"

"If you make an eight-bit sound and play it in the cinema it sounds terrible. It's got no balls to it. So we did a pseudo eight-bit thing where it sounds like an eight-bit punch, but it's not – it's an amalgam of many different things. When you play it in the cinema it's got the weight to get you in the tummy."



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Edinburgh or Bust

A Trip Beyond The Fringe

The hundreds of performances taking place at the Edinburgh Fringe Festival each year provide a unique opportunity for artists and engineers alike. JO FLETCHER-CROSS heads to the Festival to talk to some of those who embrace the challenge of the largest arts festival in the world.

THE EDINBURGH FESTIVAL FRINGE is the biggest arts festival in the world, and takes place every August for three weeks in Scotland's capital city. Every year a host of performers descend on a huge variety of performance spaces to present shows for almost every imaginable taste. From big-name stand up comics to unknown artists hoping to build their careers, the festival caters for everyone and includes theatre, comedy, dance, physical theatre, musicals, operas, music, exhibitions, and events. The Fringe began in 1947, when eight theatre groups turned up uninvited to perform at the (then newly formed) Edinburgh International Festival. In 1959 the Festival Fringe Society was created, which formalised the existence of the Fringe, published the Fringe programme, and created a central box office. Key to the forming of the Society was the policy that the festival's programme should not be vetted – to this day, anyone at all who wants to put on a show and can find a venue willing to host them is welcome at the Fringe. There are 259 venues at the 2010 Edinburgh Festival Fringe, and I sought out the audio experts working in just a few of them.

Gilded Balloon

The Gilded Balloon, founded by Karen Koren, began its life as an Edinburgh venue in 1986, with one theatre and seven shows per day. Now it operates eight venues with over 70 shows every day. For 16 years it was based in the heart of the Cowgate, expanding to Teviot Row House in 2001. However, in December 2002, a devastating fire in Cowgate quickly spread to the South Bridge before consuming the Gilded Balloon. It managed to dust itself off and spring back, focusing on the spaces within Teviot Row House, which is now a thriving and exciting performance hub.

I met Fergus 'Goose' Lockie, Head of Sound at Gilded Balloon, at a windy bar on a roof at the venue. Despite being nearly two thirds of the way through the Fringe, and the coffee machine being broken, he managed to be about the most enthusiastic person I've ever seen in Edinburgh during the Festival, and I have seen my fair share of American high school students tap dancing their way through cheesy musical numbers on the Royal Mile. He has been Head of Sound at Gilded Balloon for two years and has been involved with the Fringe since leaving university. "I've been working at the Festival since 2002, when I became the venue technician for Universal Arts," he explained. "I got through two years of that, and then left and went to work for a sound company in Edinburgh."

This proved to be a good move in terms of training. "I got a fantastic grounding in all kinds of audio. I worked there as a freelancer and so got to work with all the other freelancers. So there were guys who were amazing at conference, who were amazing at doing really loud rock and roll, people who were ▸

Image courtesy of the Festival Fringe Society.

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amazing at doing beautiful acoustic stuff. I got to learn from those guys."

Back To His Roots

This led him back to the Festival, though in a slightly different capacity. "From that I got to work at the International Book Festival for two years, because one of the guys I worked for at the sound company was their Chief Technician. That was great – it was such a lovely place to work but one of the most challenging." Lockie admits that for some time he was not quite aware of the international reputation of the Edinburgh Festivals. "I grew up in and around Edinburgh, so the Edinburgh Festival for me is just... 'the festival'. It wasn't until a couple of years ago that I found out that Edinburgh is kind of the Mount Everest of festivals. I thought, there's got to be something tougher out there than Edinburgh, it's not that hard. But actually, it is just the toughest."

After two years at the Book Festival, he was not sure what would come next. "Another friend of mine, Simon Cass, who I knew from the sound company I'd been working for, was Head of Sound here and he approached me and asked if I would be interested in working for Gilded Balloon," he said. "I didn't know in what capacity I was going to be doing it. Cass said to me that the guy who operated the Debating Hall – which is our biggest venue – might not be coming back, and would I be interested? I told him that what I really wanted was mix experience, because that's the hardest to get when you start out. So I became Sound Engineer for the Debating Hall."

Being the biggest venue, the Debating Hall runs slightly differently to the other venues within Gilded Balloon. The small rooms have one operator, running a simple lighting board and a little sound desk together. There are three medium-sized venues, which each has a digital sound desk and a slightly better lighting desk. "The Debating Hall is the only place where you have a designated lighting operator and a designated sound operator. There's a stage manager and a stage crew and a real mic arsenal. So I came into that and I knew very little about it, it was a big learning curve."

Lockie was quickly to get the mixing experience he desired. "There's a show called *Mervyn Stutter's Pick Of The Fringe* which used to be here, and every day it's different. We would walk in at half eleven in the morning, and they'd just say, 'today's show is that' – it's all written on a sheet of paper – that's a twelve piece samba band that need miked up, this one is theatre, this is stand-up, this is a guy with a guitar and he needs miked up, he hasn't got a pick-up, and then you've got some amazing theatre that just needs a CD track at the end and they need lots of lighting. And you have 45 minutes to programme it. It's the best training you will ever find."

Diversity Is The Fruit Of Life

Lockie's role as Head of Sound is a fairly diverse one. "Four or five weeks before we come on site here I come into the office and start working through stuff," he explained. "Making sure that every venue has everything they need. Everything from a mic and a mic stand in a small venue, to having enough stuff to mic up a drum kit in the bigger venues. And liaising with the lighting and sound and the production managers to ensure that we're not missing something, that we're not going to try and hang something somewhere we shouldn't." Co-ordination is one of the most important elements in the preparation. "For instance, someone will say 'I'd like to hang a speaker', and I can say, 'Yes, I've got no problem with that, but what we need to do is speak to lighting and make sure that we can do it with weight'. There's a lot of co-ordination that goes on between lighting and sound and the production managers, to make sure we're complying with legislation."

Once the Festival has begun, the technicians at the venue are under a lot of pressure. "We don't duplicate our crew. We think it's a good thing, because when you come in to do a show, you always have the same crew. Our boys and girls work very hard, and we're very, very, very proud of them. But it's hard going." Gilded Balloon gives their weary technicians a break by using a roving technician, who learns every show in the morning and evenings. "He goes round and tries to give them nights off and mornings off and just let them sleep. We try to give them as much sleep as possible and if someone gets ill, we step in and cover them."

Working so hard together can be a bonding experience, Lockie told me. "It becomes like a really tight family, and every year when it finishes, it's hard. You know everyone, you spend a lot of time with people, a lot of people are living in the same house, you're drinking together, you're working together."

Challenging But Fun

Like all Festival venues, Gilded Balloon faces its own particular challenges. "In the smaller venues, like the ones downstairs in the basement, the problem is noise between venues," said Lockie. "Leak between shows is quite hard, you have to programme carefully. If you put a really, really loud show next to a one person show where someone's pouring their heart out, that's really not helpful." Having so many shows in so many spaces brings its own problems too. "Some of the venues have a quarter of an hour turnaround; the Debating Hall and

some of the larger venues have a half hour turnaround. Getting 350 folk out of the main hall is pretty hard, and then getting another 350 folk in another set of stairs, is a bit of a nightmare – as well as setting up the stage." He showed me a piece of paper, with a list of times and tasks on it, depending on what shows are beginning and ending. The tasks run from switching on the lights in the bar to setting up a full kitchen on stage. "Time is always against you. You know that every hour or half hour you have to be somewhere – there's always something to do and you have to keep it going to keep the building going." This is not a cause for complaint. "It's great fun. I love it. There's never a dull moment."

Net Cabaret

As well as the big venues with hundreds of shows going on each day, there are numerous small venues in the city with a diverse range of performances. House Cabaret is one of the more unusual productions taking place at the Fringe, quite a feat at a festival that prides itself on outlandish events. Billed as a 'live Internet house party with live music, comedy, and chat from the best of the Edinburgh Festival', House Cabaret involves a small troop of artists turning up at your own front door to create an evening of entertainment for you at home – and also broadcasting live on the Internet.

Colin Purves is Chief Technical Officer for the company. He has worked as a Jim Henson trained TV puppeteer, and has worked on film, adverts, and many TV series, recently moving into directing. He is passionate about the potential of the Internet for those working in the field. "I believe that the TV world is going to be rocked by the IPTV phenomenon that is just around the corner. The Internet will prove itself as the great leveller and allow those at home to take their own recorded, or live television shows, and pit them against the traditional media big boys. The content is already online, it now just has to make that final step onto the flat-screen TV in your living room." Content such as House Cabaret.

Early Starts, Late Finishes

The technicians have a fairly nerve-wracking schedule, turning up at 5pm at the house of whoever has booked the cabaret for that evening, having only spoken on the phone with the house owner. Live broadcasting begins at 7.30pm. Purves insists that the timescale is not quite as high-pressure as it sounds. "The system is designed to be simple for novices to use, there is very little to do." First of all, the composite AV cable is plugged in to the camera and to the USB video capture card. The communication headsets between the Director/Computer Operator, Floor Manager, Cameraman, and Presenter are then tested, and the laptop is powered up with UStream Producer running – and then the operator simply has to click 'broadcast' at the right time. All that remains to be done is

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to monitor the show's website to make sure all is broadcast well.

The main difficulty that has to be faced is the quality of the Internet connection at each 'venue'. "That is something that always has to be tested on site before a performance is agreed at that location. The broadcast can only be as good as the internet upload rate." This kind of broadcast does lend itself well to low-tech resolutions. "Through testing with viewers, we have found that even a low bit-rate broadcast is really watchable with gentle camera work. It's pauses and jerkiness in the video stream caused by too high a bit-rate over a temperamental Internet connection that is much worse. Otherwise the broadcast can happen from anywhere, anytime."

Colin chose the equipment with a very low budget – typical for a production at the Edinburgh Festival – in mind. One bargain in particular was the free USTREAM Producer. "USTREAM Producer was chosen, over the many other live broadcast platforms available, mainly for its easy-for-the-beginner-to-use USTREAM Producer programme," explained Purves. "The Director/Computer Operator was going to change from one performance to the next, so it was vital that a quick to learn system was found. Second to that, live Internet interaction with the Internet audience was also vital to the show's content, and so USTREAM's chat options for users of Twitter, and many social networks – such as Facebook – was attractive. Right now, USTREAM has a slim lead over its competitors in its support of social media."

As can be imagined, this show faces some very particular challenges. "Getting Internet viewers aware of the show is difficult at first. The key to good traction in this space seems to be to have good links from popular websites to your show." He offered some advice for those considering similar ventures. "Get popular bloggers and podcasters to cover your show if you can. If you can get people to discover your show for themselves, without being bullied through advertising, then they will more likely feel ownership of your production and become 'followers' or 'fans' of your show." AM

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INFORMATION

www.gildedballoon.co.uk
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PLEASANCE

Pleasance Edinburgh is one of the longest established venues at the Fringe. It opened as part of the 1985 Festival Fringe, with two theatres facing onto a deserted courtyard-come-car park at the unfashionable eastern end of Edinburgh's old town. In 2009, the Pleasance celebrated its 25th season at the Edinburgh Festival Fringe. With 25 theatre spaces ranging in size from 20-740 seats across two locations, the Pleasance is the largest venue at the Fringe. 2009 saw more than 500,000 people watching one of 225 shows. Pleasance also has a strong presence in London, with the Pleasance Theatre Islington offering a strong and exciting programme since it's opening in 1995, with a mission of providing a platform for future talent.

Tom Lishman is Head of Sound at the Pleasance. Outside of the Festival he is a freelance sound designer and engineer.

How long have you been worked at the Pleasance?
12 years. I have been Head of Sound for that entire 12 years.

How many people work in your team?
There are three in my direct team, although altogether across the venue I think we have around 90 technicians.

Do you design the system in each venue?
Yes, I design a basic system for each venue and then we try to be flexible within that. We put in a core system and companies can either hire in extra equipment from us or they can bring their own, we always try to accommodate that. We have mostly d&b equipment, and Yamaha digital consoles in the bigger venues. In the small venues – which is what we mostly have, tiny 60-seater rooms – we have baby Soundcraft desks and a little EVS-40 speaker system, a mic and 2 DIs.

What are the particular challenges of your venue?
Like most venues in Edinburgh, getting everything to run on time, so scheduling, I would say. There are so many shows and so many people coming in and out, it can be quite complicated.

What do you enjoy most about working at the Pleasance?
It's always a unique challenge. I've seen it grow so much – I think in my first year there were 11 venues and now there are 25. I like the feeling of being part of the family. And the training is so important – not formal training but the experience of running a venue. The younger part of the industry is full of people who have

Image courtesy of the Festival Fringe Society.

UNDERBELLY

Underbelly has leapt up from its beginnings in 2000 as a small-ish venue to turn the 'big three' venues (Pleasance, Gilded Balloon, and Assembly) into the 'big four'. Established by Ed Bartlam and Charlie Wood who operate the original Underbelly venue in Cowgate, the company has gone from strength to strength. In 2004, it took over the Niddry St Caves and has since run three spaces there under the name of Underbelly's Baby Belly. In 2006, the Udderbelly Pasture was created at Bristo Square, incorporating the E4 Udderbelly (a very distinctive enormous upside-down purple cow) and E4 Cow Barn (Reid Concert Hall during the rest of the year). In 2007 McEwan Hall in Bristo Square was added, and in 2008 Appleton Tower at the University of Edinburgh was incorporated into the Udderbelly Pasture. 2009 saw Underbelly joining forces with London's Southbank Centre to bring E4 Udderbelly to the Southbank for an eight-week summer programme, something repeated with great success this year.

Dave Watson is the Technical Production Manager at the Underbelly. He has been involved with the venue since 2002, when he was lighting operator for a show produced by Underbelly Director Ed Bartlam. During the rest of the year, Watson runs his own lighting design and event management company.

How long have you been working at the Underbelly?
This is my 9th Fringe.

How many people have you got working in your team?
There are about 50 to 60 technicians, and the site managers as well, there are another 10 site managers.

How far in advance of the Festival do you begin preparing the Underbelly?
We start about three and a half weeks before the previews begin.

Do you have a different team of people setting up the venues or is it the same people who will operate the shows?
We get a team of freelance technicians to do the build with us and some of the venue technicians are also there and help with tasks beforehand.

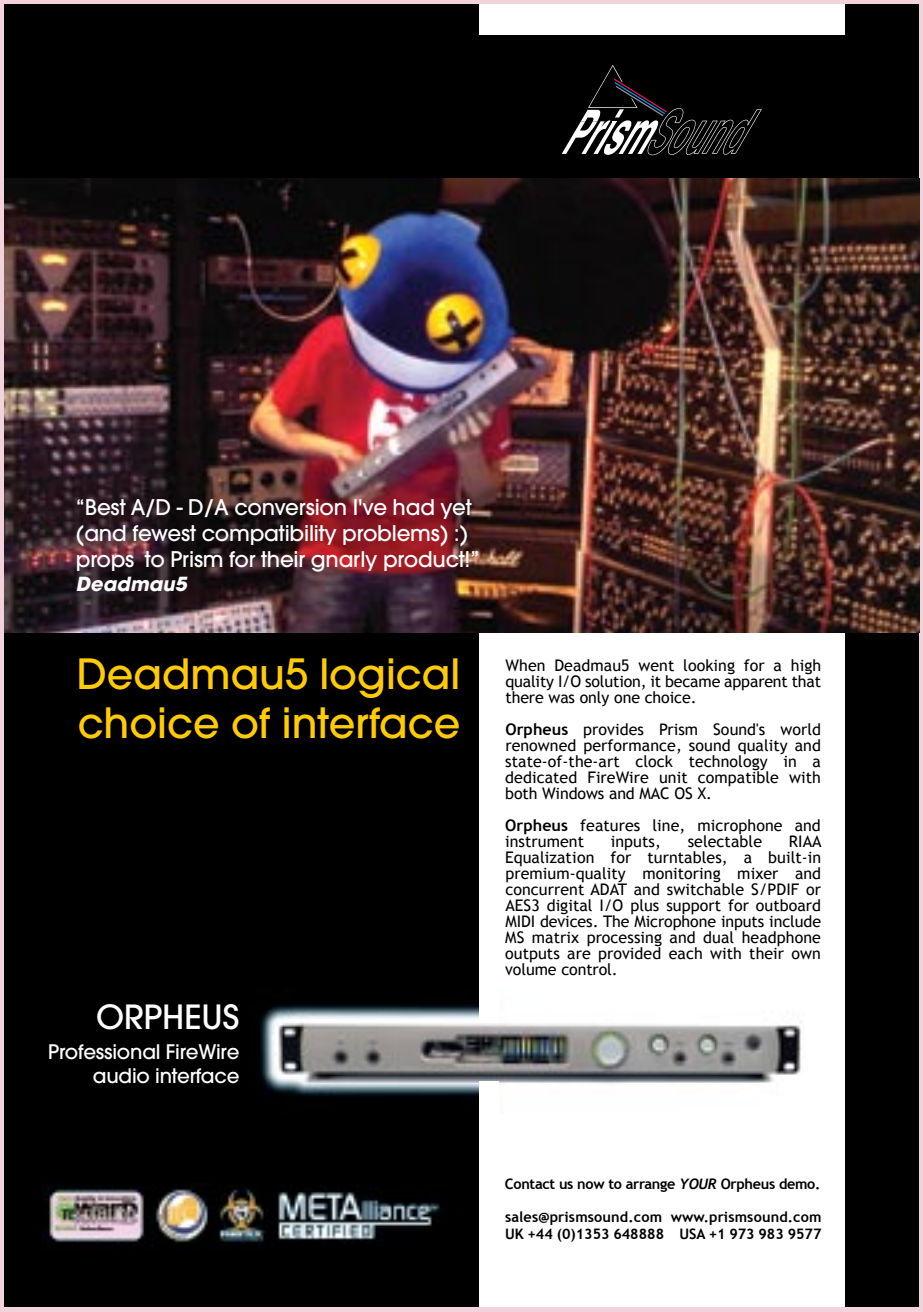
How much say do you have in the equipment that goes into the venues?
I have total say. In the bigger venues we've got the Yamaha M7CLs, in the McEwan Hall and in the Cowbarn and the Udderbelly. Then down in the Cowgate we've got an LS9 in one of the venues, the rest of it is 12 or 16 channel analogue desks. We hire in equipment each year.

What are the biggest challenges that face you at the Underbelly?
Down at the Cowgate, it's a disused building for the rest of the year, so everything that is there we have to put in, the lighting rig and also all the power. There's power in one location and everything runs from there. Up at Bristo Square, obviously it's just a square, so we have to build this whole other structure. The biggest challenge up there is the logistics side of things. Because we've got so many trucks coming with technical equipment, it's trying to get everything to not turn up at the same time. The biggest thing is the schedule, trying to keep all the venues on track.

What do you enjoy most about working at the Underbelly during the Festival?
It's a good atmosphere, there are a lot of good people. Quite a lot of the time there are new challenges. This year, the McEwan Hall was a big new challenge. The people are nice – a lot of the venue technicians come back each year so we have a lot of repeat staff and its nice to see them because a lot of them started in some of our very small venues, and a lot of them now are now in the Cowbarn and the Udderbelly and you've seen them head in the right direction and get all these new skills.

INFORMATION

www.underbelly.co.uk



Genelec 8260A

The tech spec is mind-blowing, but it's JERRY IBBOTSON's heart that suffers the real impact of Genelec's simply beautiful 8260As.

DO YOU LEAD WITH YOUR HEAD or your heart? I know that's a rather zen question to begin a review in a magazine like *Audio Media* but it's an important one. Whether you're an engineer, a sound recordist, or a sound designer, you're going to be constantly stepping from the world of technology into the world of creativity and back again. That's exactly what I'm doing right now, in attempting to sum up Genelec's 8260A monitors.

You see, they're stuffed full of some very, very clever technology devised by some extremely clever men with beards (well, I picture them having beards). Not only do they set themselves up for whatever room they are in but they also have a driver system (the bits what make the sound come out) that is so smart it carries its own acronym.

But will the super shiny technology (that leaves a buffoon like me a tiny bit afraid) impress my creative side? That's the bit of me that earns the money, after all. There's only one way to find out...

Overview

The speakers themselves are quite large, at least to someone who's used to using a set of much smaller Genelecs in their day-to-day audio work. Thankfully, there's a handy carry-strap attached to the back of each, which helps in lugging them out of the crate and into position. The usual high standard of Genelec build quality is immediately apparent: a cabinet made of metal and all controls screwed securely in place. These babies exude class.

Let me tell you something about them. The 8260s have, according to Genelec, a 'revolutionary three-way loudspeaker design'. Basically there are three cones, for different frequency ranges, but only two are visible. That's because the driver for mid-range frequencies (MF) and the tweeter (HF) are mounted concentrically: one inside the other atop the ten-inch bass driver.

In itself it's nothing new, and Genelec itself provides a brief history of coaxial driver development in a document highlighting the merits of the 8260s. One of the earliest examples of this design came in 1941 from Altec Lansing, while five years later Tannoy produced the Dual Concentric speaker. And so the development of the concept has continued over the years.

The strength of this approach is that, for a given cabinet size, you can have drivers that are each dedicated to a narrower frequency range while at the same time having a single point source for the two drivers.

According to Genelec, one of the drawbacks of other coaxial solutions is that the lower frequency cone can cause distortion to the higher frequency one. One is, after all, tucked inside the other. This leads to an uneven, or ragged, frequency response from the speaker as a whole. However, most of the other solutions involve a woofer/tweeter combination. Genelec use a tweeter/midrange combo so there is far less movement to disturb things.

In this Minimum Diffraction Coaxial, or 'MDC', there's a curved flexible foam midrange cone and sitting at the centre of it is the coaxial tweeter. That midrange cone forms part of the waveguide, which in turn is part of the driver design. The line between cabinet and drive unit has been blurred, according to the designers. One is part of the other.

THE REVIEWER

JERRY IBBOTSON runs Media Mill, a York-based audio production company started in 2000 that specialises in sound for video games. Prior to this, Jerry was a BBC journalist for ten years, ending his spell with the Beeb as a reporter and newsreader at Radio One Newsbeat.

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TC Electronic System 6000 MkII (Part 2)

John Rogerson, Danny Finn & Sam Castleton continue their first-look review on the TC 6000 MkII. For part 1, see AM June 2010 (you can get to the digital edition though the AM website).

FOLLOWING ON FROM LAST MONTH'S REVIEW of the TC 6000 MkII, we've let Sam Castleton, one of the mixers at HALO, loose on it for the first time to get a sense of what it's like from a complete 'first impression' perspective. We've also had more time to look into what it offers owners of the 6000 MkI who want to upgrade to the MkII. But before all that, we'll go back to Danny Finn who has been putting the 6000 MkII through its paces for the last few weeks.

Danny Boy...

Last month I gave you my first reactions as I started to use the MkII. This installment should be a more in depth look. I say: 'should be' – I think I'd need a month of non-stop fiddling to get to the bottom of all the ins and outs (pun not intended. The inputs and outputs are dead easy). I want to give it as fair a report as I can, and each time I go back to it I discover something new.

First off, an apology, last month I stated that our delete key didn't work. The day after… I discovered (don't laugh) that it isn't a delete key in a backspace kind of a way, but in a delete key kind of a way. Sorry about that.

The two things I really wanted to delve into deeper were the noise reduction system (Backdrop), and the LM5D loudness meter (which incidentally is part of the upgrade offer for MkI owners, but more of that later).

Backdrop, the noise reduction system has three separate algorithms/ models: basic, multi-band, and multi-type. Basic is, well, basic. It attenuates the whole signal across the frequency band. Being a boy, I love the parameter 'aggression'. How could you not? It's applied as a percetnage on the amount of processing applied. It's OK if used sparingly.

Multi-band, as the name suggests, provides three separate noise reduction engines. The crossover frequencies are of course adjustable. Much better than the basic, and it worked very well for the dialogues I was pre mixing. I seem to recall that the old outboard TC dBMAX had a five-band noise reducer. There were certainly times when I thought that three bands were too wide for the effect I was looking for. It meant a lot of stopping and re-calculating noise prints for different scenes where as, back in t' ol' days with a careful set up at the start of the day it would almost run for the entire show with only an occasional change of frequencies.

The third model is called multi-type, and very clever it is too. I won't bore you with the factual details (available on TC's website), but basically the noise is split between buzz, room, and hiss. All three have separate parameter controls. This is the one where I still have to put it fully through its paces, but early indications are that this is very good and rewards a bit of a fiddle.

Loudness

All of us in broadcast TV are familiar with loudness meters. Specifically, the Dolby LM100. Having never used the LM5D I was keen to see what the fuss was about. The graphics certainly looked the mutt's nuts, reminiscent of a radar screen from a sci-fi movie (a fact not lost on TC as it calls it 'the radar page'). Visually it looks great, and after a while it becomes second nature to use. It is much cleverer as you get a continual readout and can see exactly what you are doing and how it affects the loudness, rather than waiting for the short term to change. When I used the Dolby box I had it situated right in front of me for ease of use. The placement of the MkII was a little more tricky to keep it in my line of sight and still reach all my faders. I was, however, excited to see that you could change the time it takes one revolution of the radar screen from one minute to 24 hours (does it still count as short term if it's 24hours?)

Ignoring high background noise and (god forbid) white water, the LM100 is normally great at isolating just the dialogue for the loudness reading. TC says that the LM5D includes a technology, recommended by the EBU and known as a "relative gate", which excludes silence and noise from the measurement. When the R128 recommendation is finished in September 2010, EBU Mode will be added, thereby making the relative gate discriminate between foreground and background sound in a standardized way. A measure of foregorund loudness is more universal than dialogue level, which isn't very useful with commercials, promos, music, and so on.

LM5D also includes a readout of a program's Loudness Range, which should also be part of EBU R128.

System 6000 MKII also contains new algorithms ▸

THE REVIEWER

JOHN ROGERSON owns Halo Post Productions, based in Central London. He has worked as a Mixer for the past 23 years. DANNY FINN is Head of Audio at Halo, and has recently won the RTS Award for Best Drama Mixer 2009.

to display and limit true-peak level, another parameter recently specified by ITU and EBU to prevent listener fatigue and distortion in digital audio. MKII's new summing mixer, Matrix 88, includes true-peak limiting as an integrated part of its bit transparent summing busses, thereby preserving resolution without risking overs.

Maybe it's more down to me being stuck in my ways, but having said that I am now mixing with an outboard effects unit! I never thought that would happen again.

Sam Castleton: The First Time User

Having stolen the box from Danny I find it's not really one box at all... the 6000 MkII is a beast with two heads, the 'Reverb' 6000 and the 'Mastering' 6000, and I guess I'm in the reverb section because the first thing I notice as I start playing with the ICON's touchscreen is the sheer number of reverb presets. 600 to be precise, and as TC describes the 6000 as a 'constantly evolving platform', there may be mre to come… so lots of reverb then.

The presets are grouped separately for music, film, surround, and others such as 'delays and effects'. A particularly nice touch is the 'Hall of Fame' which is full of goodies from users such as Skywalker. All the 5000 presets are here as well.

Despite not being a fat bloke with fat sausage-y fingers, I was surprised how fiddly it was to scroll through the library – you'd have to be the Ronaldo of the touchscreen to do it without any mishaps. Thankfully you can avoid too much nonsense by adding favourites to a bank with all your customised settings intact. There's also a category wizard and a word search, but in truth, I didn't use them much; maybe in time they'd become more use as I get to know the names of my favourites.

The reverbs on the 6000 are simply delicious and the surround reverbs, in particular, are inspiring. Having all parameters assignable onto touch sensitive faders gives you real precision and control, quickly. All the output sound I got was rich and realistic. You can adjust these reverbs to your heart's content, and the layout in the reverb section allows you to do so fluently. When I select 'BMW Limo', there is a separate section for early reflection. Here, I can pan, add colour, increase the low cut, or even change the early reflection type entirely to… say… 'Phone Booth'. I can then go to the 'levels' section and perfect the dry, wet, in, out, and early reflection levels respectively.

Having the separate parameters on touch sensitive faders gives you real precision and control, perfect for ADR or similar tasks. This level of control, combined loads of high quality presets really gives you a sense of boundless possibilities and, for me, this is where the S6000 comes into its own. However, I didn't feel the 'delays and effects' managed the same heights. Although the delays were unsurprising… err... delays, I thought effects were mundane. These initial offerings all use the pitch, pan, delay, or reverb engines. For me there simply wasn't enough variation for something of this price. I do a fair bit of sound design and need to get at the weird and wacky quite quickly. I was hoping the 6000 MkII would shine here.

Onwards, and with one nifty Ronaldo-esque touch of the 'factory' button we enter the world of the M6000. All the bells and whistles are here, surround metering, multi-band compression, EQ, de-essers, and so on. The usability and flexibility is impressive… endless tweakability. The compressor is solid, reasonably transparent, and has a separate LFE compression option. The EQ has a nice fine Q, but give me knobs any day – I found the navigation got in the way as I had to use seperate gain and frequency menus. There may be a way around this, but I couldn't find it quickly and if it ain't quick, it's a pain in the you-know-what.

I've never used a 6000 before, so lack any level of familiarity with it. No doubt some of the things I found irritating would improve with more 'playtime' and possibly software updates. It is, on the whole, quite sensibly laid out.

TC has succeeded in creating a quality marriage of Reverb and Mastering units, the reverb side is beautiful, the mastering side is everything you need to do the job. But it my opinion it just does too much. No doubt about it the R6000 & M6000 sides are fantastic, but most serious users will already have great metering systems and compressors, and as a catch-all EQ, Reverb, Compressor, etc, etc, there's a lot of navigation to deal with. So, personally if I was to have one of these I'd choose either an R6000 or an M6000 (which, by the way, you can) rather than both 'modules' in the same box. My job is always a balance between achieving the highest quality results in a specified number of hours or days, and I just think it's not something I'd have the time to use fully. The result would be that it sits at the side with 'a couple of presets that do the trick but never get changed'. To justify purchase I think you'd need to have the time to use it fully. I don't… but if you do you may well grow to love it.

Upgrading From The MkI

Should Mk1 users be looking to upgrade? Well, at a cost of about £1,500 let's see what you get.

For £1,500 you'll get a snazzy new brushed aluminium mainframe casing with no floppy drive which used to be for upgrading software on the MkI. You can now do that online. You also get the mainboard and component replacements, which effectively make your MkI a MkII. TC has bundled in a new licence for the LM5D meter, but if you don't mix commercials you're unlikely to want it other than to look at and pretend you live in a spaceship. You can also choose between VP8, UnWrap HD (stereo to 5.1), Stereo Mastering, or Stereo Reverb license. Finally, you also get an extra one year's warranty, which is nice. Upgrades are all done via TC dealers and they'll refurb and clean up your box (fnah, fnah) while they have it.

TC has informed 6000 MkI users that they won't be able to upgrade their software beyond the current v5 release without an upgrade to the new 6000 MkII hardware. Clearly there are practical and technical reasons why the older components/mainboard prevent software upgrade beyond v5, but the only worry for me is that if you don't want an aluminium case or a LM5D meter, or more to the point you don't have £1,500 spare, you'll be left carrying a box that cost you many thousands of pounds a few years ago and that will not now enjoy any future software development. I'm guessing (hoping) there's no time limit on this upgrade. For those with lots of spare money you can upgrade your CPU and ICON remote (£3,215) or just the CPU (£1,740) – this is on top of the £1,500 mainframe upgrade…

On balance TC's choice of upgrades seems a fair one and I applaud its efforts to find an affordable and quick way (it fast tracks upgrades through the factory) to bring its core clientele into the future with it.

As for those looking to purchase a brand new MkII, it's worth saying it's worth every penny, if it's what you're looking for. It does what it does brilliantly, sounds and looks superb, but isn't meant for everyone… it's top of the tree stuff.

Where Do I Stand?

I sat with Danny and Sam and chatted briefly about their thoughts and experiences, and while we were all deeply impressed we were just left with the question of… 'how it would fit into our world?' Speaking personally, as the owner of a TV post-production facility with four sound studios – I would need four of these to keep all the studios identical, which they need to be. That's £40K+.

So what I can say with complete confidence is that this isn't something that would fit into my company's workflow practically or economically. TV budgets simply don't allow studio playtime, and frankly most TV speakers do not reflect beauty in the same way that modern cinema does, so too much super high-end kit is simply an expensive luxury.

That's not to say it's not perfect for studios/engineers, etc, with different priorities and budgets, especially those who don't already own lots of classic (or modern, for that matter) outboard and comprehensive plug-in libraries. The MkII really is the complete all-in-one solution, but it would make much of your other signal processing kit redundant if you used it fully.

For me the beauty of the modern DAW is its completeness, no need to ever back up more than one thing…. i.e., the session you're working on. I don't want to have to run the 6000 MkII on MIDI or a timecode input that chases my DAW output and back up the automation seperately because I know it'll get lost or, more likely, forgotten. For me, backing up outboard automation and 'scenes' is only fun if the option is being eaten by a shark.

If you have a need for the stereo to 5.1 up-mix function, the brilliant limiters, beautiful reverbs, EQs, and extra bits and bobs, noise reduction algorithms, and various types of signal metering and measurement in one box, then this may well be for you. It also has bags of potential in the live production disciplines, and where the DAW isn't the centre of your universe – such as in cinematic finals where it's mostly you and a console. And MkI owners may not be able to resist the upgrade deals. I know I've been harsh in my appraisal of its potential in my own facility – but make no mistake it's very, very good. If you buy one and have time to squeeze everything out of it, I know you'll love it… AM

INFORMATION

£ **GB£9,900.00 (exc.VAT)**

Ⓐ **TC Electronic A/S**
Ⓦ **www.tcelectronic.com**

EU Loudness Standard Info
Ⓦ **http://tech.ebu.ch/groups/ploud**

JDK Audio R22

JDK Audio – the new brand from API – offers the R22 featuring the legendary ATI Paragon live console's compressor circuit, times two.

IT MAY LOOK LIKE Cold-war era communications gear, but it's really a brand new compressor with an impressive pedigree. If you've ever heard audio flowing through an ATI Paragon console, a very popular analogue live console, you've likely heard the R22; its design is taken directly from that channel compressor. Owned by ATI founder/owner Larry Droppa, JDK is essentially a part of the Automated Processes, Inc. family (as Droppa purchased API some time ago). However, please note: this is not an API box. The R22 clearly does its own thing.

Features

All the typical compressor controls are found in the R22, with a few notable differences. The compression envelope is automatic, as no attack or release controls are offered, but a soft knee/hard knee switch helps you gain control (no pun intended) as signal crosses the threshold level. Image stability is helped by true power summing of both input channels (for consistent L-R stereo imaging). The thrust circuit helps prevent pumping or dullness due to low frequency content excessively triggering compression; to my ears, it sounds like a 160 Hz high pass filter in the sidechain.

XLR and TRS I/O are provided; the R22 does not have sidechain connections (which would be excellent). The large and commanding VU meters show gain reduction or output, and a big, rude red LED reminds you that you've crossed the threshold into the land of the attenuated; you'll need constant reminding too, as the R22's transparency may make you forget that it is in. I may be exaggerating that last point a bit, but the R22 really doesn't add much colouration at all, so the red LED will have to remind you when you're actually squeezing things.

In Use

My first tests were with whole mixes. Without being able to slow the attack and release to my tastes, I had to tweak the ratio, thrust, and knee controls before getting the needed congealing and levelling without squashing my snare, kick, and tom 'poke through' peaks. In the end, my preferred setting was a ratio below 2:1 (what a useful option!), thrust on and a hard knee. Yes, hard knee -- it seems to forgive at the transition more the way I like (while the soft knee tends to grab and make me question my threshold level or wish to slow the attack). As you raise ratio from here, you can hear a little dulling with more attenuation, but at a reasonable 3-4dB, you'll find the R22 nearly invisible other than its subtle massaging of your mix levels and density.

I tracked some bass guitar with results that were just as good as on the main bus. With a Manley TNT preamp (DI through the tube side, ribbon mic on bass cabinet through the solid state side) and the R22 used in dual mono (no linking) I got just what I wanted; two steady and clean signals, still animated and lively enough for some comp/limiting in final mix. I settled on 3:1 for the DI using hard knee with thrust. For the mic I went with 3:1, but no thrust, soft knee (I find thrust preserved all my bottom end punch, no thrust helps contain it). Once again, I wish I had a manual envelope, but only a little as the R22 was politely getting the job done without extra dirt or attitude (bass guitar doesn't always have to be 'browned up', does it?)

> "With a Manley TNT preamp and the R22 used in dual mono I got just what I wanted; two steady and clean signals..."

On overheads it was the same story -- if you like your mics, your room, and cleanliness, just slap some 2:1 on the pair, with hard knee and a high threshold, and increase your density without touching any particular frequencies. If you're looking for a Brit-inspired pumping thing, just go 3:1 or higher with soft knee and no thrust; it isn't dirty but it sure has character.

Across a grab bag of assorted sources (trumpet, handclaps, percussion, group vocals) the bottom line remains constant: this box will squeeze all of the above without grabbiness (as long as you keep ratios low enough) and do it 'full bandwidth', without compression artifacts (unless you try to create some). This makes the R22 great for dynamic acoustic sources like string instruments, only occasionally falling short without needed envelope controls for really pesky sources. Lead vocals are similarly addressed: use the R22 with low ratios when accuracy and transparency is your goal, look elsewhere if grit, squashing, or girth inspire you. However, I did find uses for the R22's higher ratios and the 'grungy' side of its personality.

Applied as parallel compression on a stereo drum buss with low ratios and moderate attenuation, the R22 was Hippocratic in that it did no harm to my drum sound, and didn't really bring anything other than density to any audio surgery work. Determined to find some flavour, I tried high ratios (10:1, the R22's max) with a low threshold (with signal constantly below threshold) and got a nasty,

THE REVIEWER

Rob Tavaglione owns and operates Catalyst Recording in Charlotte NC. Contact him at robtav@bellsouth.net.

JDK R22 SECOND OPINION
BY RUSS LONG

I'm already a fan of the entire JDK Audio product line (the R20 mic pre as well as the R24 and V14 EQs), so I couldn't wait to give JDK's fourth product, the R22 compressor, a run for the money. I've mixed dozens of live shows on ATI's Paragon II desk, and I've always loved the inline compressor that's on every channel. Since the R22 is based on this compressor, I anticipated it would be great and I wasn't disappointed.

With both balanced quarter-inch TRS and XLR I/O per channel, the R22 is easy to set up and get running. I was somewhat concerned that the lack of an adjustable attack and release time would limit the box's usability, but that wasn't the case. I initially put it to work while tracking a vocal, using an AKG D5 mic through a Gordon Model 3 mic pre and Black Lion Audio AM/CHA1 EQ before going into the R22; the box worked wonderfully. I was able to attain significant gain reduction without any sonic degradation. I also had great results using the box to compress electric guitar (Royer R-122 through a Neve 33115 mic pre and EQ), acoustic guitar (AKG C-28 through a Gordon Model 3 mic pre), and bass (Groove Tubes Brick DI). The R22 pulls the guitars to the front of the mix while still sounding natural. I squashed the bass to death, and it still remained punchy and full yet was completely controlled.

The Thrust circuit — placing a high-pass filter in front of the RMS detector — is the closest thing the R22 has to an audio magic switch; it nearly always sounds better engaged as it preserves the bottom-end punch while still providing immaculate gain control and eliminating the over-compression of transients.

The R22 works great as a stereo compressor. If the Link circuit is engaged, channel A controls all of the functions for both channels and the compression control signal is derived from the combined audio signals from both channels. I had great results using the R22 in stereo mode on piano, synth, drum overheads, drum room, and drum bus for parallel compression and stereo bus. In every instance, it worked wonderfully. I wish the link function didn't link the output gain because I'd like to be able to use the R22 to balance a lopsided recording while simultaneously compressing the signal; this isn't a huge issue, though.

My only real complaint about the R22 is the operation of the bright red LED that illuminates when the input signal is above the threshold setting. Typical compression settings result in a bright red blinking LED and unfortunately, my mind has been trained to automatically assume that there is some kind of problem when it notices that a red LED is flashing. Of course, I've started to become a bit numb to the light now, so the next time I clip my ATR-102, I'll likely not even notice until I get to mastering.

THE REVIEWER

Russ Long is a producer, engineer and mixer. He owns the Carport studio in Nashville and is a senior contributor to PAR. russlong.ws

totally levelled drum containment that was not unlike an 1176 on 12:1 with a grabby, fast attack. Even though I often slap an LA-2A emulation on my lead vocals (for EL-OP velvety smoothness), I also liked the R22 strapped across my stereo vocal bus (leads, doubles and backups, the whole group) for some nice leveling and regulation without disturbing the delicate balances or the timbres.

Summary

The R22 is a fine compressor in its own right and comparisons to any legendary API compressors are only general. With 'old' and 'new' settings, as well as a full complement of envelope controls, API compressors are eminently versatile and can be coaxed into most any application. The R22, however, does two tasks very well: unobtrusive, artifact-free, clean compression or dirty, flattened 1176-style (abused) leveling. With attack and release control, this box would be nearly lethal. Without those, it's still powerful and flexible, for those who aren't afraid of tweaking every single parameter to find sufficient control.

I have found the R22 to be a compressor that I can take for granted to squeeze dynamics without calling attention to itself. That may not sound very glamorous at first in a world often dominated by chameleon-like emulations, powerful signal crushers, and processors that scream for attention. But like a football lineman that does very heavy, important work for the team without fuss or glory, the R22 is ready for some heavy lifting without asking for any attention other than the constant reminder of that threshold indicator LED.

INFORMATION

Ⓢ GB£899.00 (inc.VAT)

Ⓐ JDK Audio
Ⓣ +1 301 776 7879
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It's an 'ARD Life

The disruption of Crossrail necessitated a move for German network ARD, but could it be a blessing in disguise? KEVIN HILTON finds out.

All major national broadcasters have some kind of presence in other countries. This varies from a local office or bureau to a substantial broadcast centre mirroring the headquarters back home. German network ARD covers the UK and Republic of Ireland from London. The importance of overseas was brought home to the broadcaster when it had to find a new home in the English capital.

A move was necessary because of the Crossrail project, which has had a major impact on the post-production sector in Soho. ARD's old London office had been on Great Chapel Street, not far from Soho Square, where the disruption caused by building work for Crossrail is most obvious, making the building unusable as a broadcast centre.

Under The Umbrella

ARD is the umbrella name for the German association of regional public broadcasters – literally translated, the initials stand for 'consortium of public-law broadcasting institutions of the Federal Republic of Germany'.

This group comprises Bayerischer Rundfunk, Hessischer Rundfunk, Mitteldeutscher Rundfunk, Radio Bremen, Rundfunk Berlin-Brandenburg, Saarländischer Rundfunk, Südwestrundfunk, Westdeutscher Rundfunk, international network Deutsche Welle, and Norddeutscher Rundfunk (NDR).

NDR, which in English stands for North German Broadcasting, transmits radio and television services to Lower Saxony, Mecklenburg-Vorpommern, Schleswig-Holstein, and the city state of Hamburg, where it has its studio centres. The TV operation is based in the Lokstedt district, with the radio studios in the Rotherbaum quarter. Regional offices are located in Hanover, Kiel and Schwerin, with a presence within ARD's national broadcast centre in Berlin.

ARD's London offices are run by NDR, which owned the Great Chapel Street building for over 30 years. After the Crossrail project was given Royal Assent, a 21-month undertaking between NDR and the developers followed. During this time the broadcaster looked for new premises.

An End, And A Beginning

The search ended with a disused factory off Tottenham Court Road, just over Oxford Street from the old ARD building. This had once been owned by Maples, the famous London furniture maker and retailer. Strange as it might seem now, this part of the capital was once home to factories of all types; only in relatively recent years has the scene changed, with industrial premises replaced by offices, bars, restaurants and, of course, broadcast facilities.

Work was clearly needed to make the building suitable for its new purpose but a lot more had to be done than merely converting it into broadcast studios. NDR/ARD brought in studio design consultants White Mark to not just create the new studio areas, but also manage the entire project.

Managing Director Dave Bell describes the building as "remarkably beautiful but difficult". The difficulty was not just the fact it had been a factory, it was the kind of manufacturing that had gone on there and the methods used. The premises date back to the mid 19th century; Maples' standing at the time is shown by the fact that it produced furniture for the Winter Palace in the St Petersburg of pre-revolutionary Russia.

A lot of the furniture Maples sold was made of leather. The traditional method of tanning animal skins to produce the material was to soak it in urine. As a consequence, one floor of ARD's new building was severely damaged by this substance. Add to this the need for major structural work, combined with exacting modern design requirements; and an intensive year of demolition, rebuilding, and installation lay ahead for White Mark and its contractors.

Making A Mark

White Mark established its name designing voice booths and post-production suites. The company has built over 100 rooms in Soho for facilities including Grand Central, Hackenbacker, Scramble, Molinare, and Lipsync, as well as recording studios for Peter Gabriel's Real World and the Hit Factory in New York.

In recent years White Mark has moved on to what Bell describes as ever more substantial projects; this includes the third building for post house Envy, housing 96 edit suites, and large broadcast complexes. The new ARD building is a continuation of this progression, moving the company on from a single aspect of a build, the acoustic design, into a full architectural

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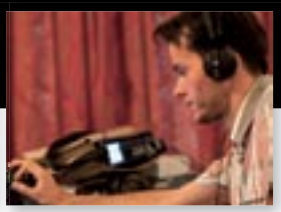
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project, managing all areas, including structural engineering and electrical design.

"This is the first time we have undertaken a project of this magnitude," comments White Mark Director Alan Cundell. "Structurally the building was in a very poor state and required a good deal of remedial work before we could begin the technical transformation. The whole of the back wall had to come off and we took all the floors back to the joists."

Even so, this was just the beginning, as the true condition of the building only became apparent as the initial demolition work started. "As we got into the project we discovered that the building was in an appalling state," says Cundell. "It became more obvious what the place had been used for. The areas where tanning had gone on were horrendous and there had also been a serious fire."

On top of this, the modern construction teams found that in past years the attitudes towards what could and couldn't be done were a lot more relaxed, with less stringent building control. "Previous owners had done a lot of structural work," Cundell explains, "including cutting out joists. This meant that parts of the floor were held up by the floor boards and these were worn through from the ground to the second floors."

Dire Straits, Drastic Measures

Such a dire situation called for drastic measures, with just about everything within the shell of the building being replaced. The back wall was removed to accommodate a glass window that runs over all three storeys. This brings in the maximum amount of natural light but, says Dave Bell, took "a lot of manipulation" to install.

The roof was replaced and a new power supply had to be installed. The existing wiring system dated from the early 20th century and, says Alan Cundell, was "simply inadequate" for the purposes of the new occupants of the building. Energy company EDF ran in a new mains cable, causing some disruption in the neighbourhood because nearby streets had to be dug up to complete the job.

Look At It Now!

ARD's London broadcast centre now occupies three floors, with a crew rest area, space for equipment preparation, a machine room, and the air conditioning compressor in the basement. The ground floor houses a fully equipped and isolated TV studio, with control room, an online editing suite, and a reception area that can also be used as a studio. Up one floor are recording areas, suites for ingesting material into the production chain, and online video edit suites, plus offices for the engineering department. The second floor has offices for ARD's chief TV correspondents, production, and administration. On the top floor are radio studios and the offices of correspondents working for ARD affiliates NDR and WBB.

Henning Schwartz of ARD TV's engineering staff in London says that NDR has a "fixed cycle of modernisation" to keep equipment up to date. The move into new premises coincided with the move from standard definition to high definition, with the installation of new technical gear.

At the time of going to press the full spec list had not been completed, but the core sys-

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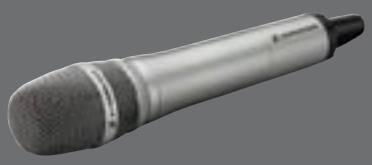

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3000/5000 Series

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tems were already installed and operational. The central storage and switching system includes an Omneon MediaDirector as the ingest server, Isilon IQ 36NL for archiving, and a Nevion VikingXSublime video router.

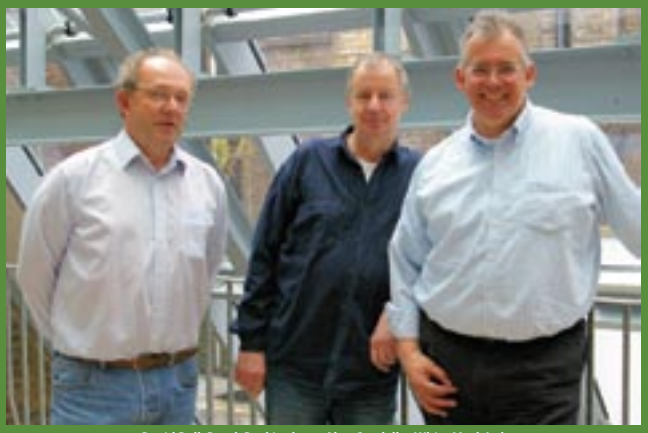
Two edit suites feature Apple G5s with Aja Kona3 and Final Cut Pro, a Euphonix MCMix controller, T+S DAS3000C audio mixer, Jünger V02 voice processor, K+H O300 loudspeakers, Neumann TLM 170 mics, Sony MSW-2000P IMX HD, and Sony PDW-HD1500 XDCAM VT recorders.

The TV studio control room also houses the G5/Kona3/Final Cut Pro combination, along with a Broadcast Pix Slate 1000 vision mixer, T+S EB312 V2 audio console, a Jünger V02, K+H O300s, and the same Sony video recorders as the edit suites.

Because 80 percent of ARD London's daily output is news, ENG equipment is a major part of the operational requirements. Camera crews are equipped with Sony BetaSX, IMX or XDCAM HD camcorders, a Sound Devices 302 compact production audio field mixer and Sennheiser mics, including the MKH60 shot gun, the Mikroport wireless system, and the SKM 5200 radio mic.

What For?

ARD London produces approximately 1,000 minutes a year of programming, including repeats. Most of this is short news items for daily bulletins, plus packages of up to seven minutes for a weekly magazine programme. Feature programmes of 30 or 45 minutes are also produced, with the focus of all the output on the UK and Ireland.



David Bell, Derek Buckingham, Alan Cundell – White Mark Ltd.

"On location we record audio mainly in mono," explains Henning Schwartz. "The edit suites have stereo workflows for additional music. Each edit suite has its own voice-over booth, which is connected directly. After that all audio signals are moved around as embedded SDI signals. Because our output is primarily news our audio workflow is kept very simple but it is all done to a high standard."

Over the past ten years, with budgets and space constraints weighing ever more heavily on broadcasters, there has been a trend towards journalists voicing reports at their desks using lip mics. ARD has not followed this. "Voice-overs at the desk or in an office atmosphere is something that is unthinkable for us," says Schwartz. "The studio and both voice-over booths have been built using isolated concrete slabs on rubber feet. Our acoustician did extensive measurements to verify the quality of those rooms and concluded that all rooms meet the specification of GK10-GK15.

Alan Cundell of White Mark explains that the TV studio is fully floated, with an insulated concrete floor. The radio studios are based on a laminated approach, using Christie & Grey proprietary mountings.

"We chose White Mark for this project because it has extensive experience of building facilities of this kind in Soho," comments Ferdinand Mönnig, architect and Project Manager on the London build for NDR/ARD. They listened carefully to our requirements and converted our ideas into great designs – and ultimately great studios. The fact that they were able to coordinate all the specialist sub-contractors needed to complete this project was an enormous advantage."

The design and building of the ARD centre went beyond acoustics and structural engineering, with decorative matters to be considered as well. Alan Cundell says White Mark has done "little bits" of all this kind of work before but this was the first project where it had taken on the management of everything on such a large scale.

The experience has clearly been significant for the company – Dave Bell describes the project as a "new departure" – but one imagines everyone involved will never be able to look at a leather sofa in the same way again. AM

INFORMATION

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Nagra LB

ALISTAIR MCGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.

THERE'S MORE THAN ONE WAY TO SKIN A CAT."

Right up there in top ten most un-PC proverbial sayings in the English language, but one that has lost none of its truthful insight. So you want to design a portable digital recorder; what features do you need? Well a recording medium (or maybe two, as with some Sound Devices machines), decide on how many tracks, a screen and some buttons, stick a port on the side to enable transfer to your computer – et voila! A recorder numerique.

Of course some manufacturers garnish their offerings with some added extras –built in effects (Zoom), or time code (Sound Devices), or maybe DSD recording format (Korg). So what does Nagra bring to the cat-skinning party?

Build, And They Will Come

Well, first, build. These guys know their aluminium, and the LB is a delight in the hand. Its predecessor, the BB, was a very competent machine, but suffered in the aesthetics department as it looked very like a car radio. The LB proudly preserves the famous Nagra selector – the rotary transport control that has graced Nagra machines for decades, which offers Rec (11 o'clock), Test (10 o'clock), Off (9 o'clock), Stop (8 o'clock), and Play (7 o'clock).

You'd be pretty pleased if you bought your recorder and got the Nagra LB's front plate. Nice aluminium, knurled easy to grasp gain pots (mine had a little mechanical grunginess), traffic light level LEDs, built-in electret mic, headphones and level control on the front panel, that rotary, and a decent colour screen. Money well spent. Ah, but pass me the cat and the spoon. On the LB's top plate, you get another screen, a jog dial, navigation buttons, custom keys, and a speaker. Something interesting is going on in Nagra world. And what's this on the side panel; USB A and B sockets and an Ethernet port. Curiouser and curiouser. But let's start with the mundane.

It Begins With A Flash

The LB records to compact Flash card, internal Flash memory, USB stick, or independently powered USB drives (bus powered USB drives don't work). I even stuck a USB card reader into the side of the LB and plugged in an SD card. No problem. It has a very clever feature that allows you to hot swap your compact Flash card provided you are dextrous enough to swap cards in about thirty seconds, but hang on half a minute. Thirty seconds is at 48kHz, down to 15 seconds at 96kHz, and a meagre seven seconds at a 192kHz. There's a nerve tester for you – pop the CF card while you're recording on that never to be repeated opportunity. It worked fine for me.

There's also a pre-rec buffer of about three seconds, which sounds a bit stingy but will probably be fine – just pay attention. Power is from a NimH battery that lasts for hours, or you can stump up for an eight AA cell battery box that promises over seven hours of life.

The LB records wavs, bwavs, mp3s, and mp2s: the latter very handy for direct import into RadioMan and other compressed file format playout systems.

The LB has two XLR inputs for mic or line with phantom power. There are two mic settings labelled in milli-volts per pascal. Just flick the switch to see which works best, unless you're the kind of operator who knows how many milli-volts per pascal your mics pump out. In which case I apologise, and yes, you look great in that anorak. The LB also has an AES digital input on XLR.

All Day Up Front

Nagra has obviously decided to put all the day-to-day stuff on the front panel – including the headphone socket and volume control – hurray, but give me just a little bit more juice. Pardon? You get a built in electret mic for note taking. It's a little thin and has a deal of zip in the upper mid compared to a £100 hand held dynamic mic, but it will get you out of jail. The colour screen is bright (sadly this being August we didn't have any bright sunshine to test it under), well laid out, and a model of readability. You get fast forward/rewind and a separate Prev/Next switch, and a nice 'cue' toggle for dropping markers in. You can also use the Prev/Next switch to seamlessly make new tracks during recording. The switches for the onboard tone generator and the input channel link complete the switchy picture, which brings us to the mini menu joystick.

Press and hold brings up the menu on the front panel screen. And here things get a little complicated. You see ▸

THE REVIEWER

ALISTAIR McGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.

the Nagra's state is defined by the position of the rotary selector where 9 o'clock is 'Off'. North of 9 lies 'Test' and 'Rec', where Test is E to E through the machine. In Test you are preparing to record so you'll want the front screen, which has a cut down version of the menus appropriate to the business of recording.

South of the 9 o'clock you get 'Stop' and 'Play'. You get the front screen in playback, but when you press the joystick to enter the menu system, the screen on the front is switched off and the one on the top plate springs into life. The joke's on me, as I hadn't read the manual, so the first time it did this I thought I'd broken it.

Menus divide us at a deep level. Consider this exchange "Waiter, why isn't this menu in Spanish?" "Because this is a French restaurant sir." I wish that weren't true, but I was there. So what do you do, put all the menus in one enormous list? Sound Devices goes down this route, and trust me it's a long haul down to the bottom – half way down you feel a little like you're lost in the forest. However if you group them like the Nagra, then you can be struck by menu memory paralysis when you can't remember whether 'Format' is under Directory or Settings or Miscellaneous. You might also take issue with the record file type settings only being available in the full menu on top of the machine, as opposed to the limited menu on the front panel. On the other hand, you might argue I set the record settings at the start of the gig and I don't want to mess about while I'm wav gathering. Take your pick.

Subtle Sonics

As you would expect from a Nagra, the sound quality of the recordings is very good indeed. I tried a variety of very high quality mics, and the transparency of the LB is such that I had no difficulty hearing the subtle sonic characteristics of some of Germany's finest. But of course, being a discerning reader, you'll want to try it for yourself.

Nagra has really gone to town on getting stuff out of your LB. Play it out via balanced XLR outputs in analogue or AES digital. Pop the CF card and take it away. Plug the LB into your PC/Mac via USB and copy directly. Copy the files from CF card to USB pen drive and remove USB stick. Record them to a USB stick in the first place. Bluetooth the file to your mobile phone using a Bluetooth USB dongle. Even better, Bluetooth the file to someone else's mobile phone. A quick note about speed: CF card to USB stick takes about five megabytes a second, over Bluetooth it's about five megabytes a minute. They even include a built-in speed tester for your CF cards to check it will run fast enough for high sample rate recording.

Now where was I? Oh yes, getting audio out. How about FTP over the built-in Ethernet port? I know! How geeky is that? File your piece direct from the machine via FTP. Swiss journalists must be a cut above is all I can say. What's that, you want to edit your audio before you send it? Just fire up the on-board editing.

I don't think anyone will buy the LB as an editor. First you can only really edit 48kHz files (no high sample rates, no 44.1) and 16-bit only. And secondly, editing is a bit fiddly and I wouldn't want to edit a radio drama on my LB. However, if you need to top and tail a piece or build a simple package this will do the job.

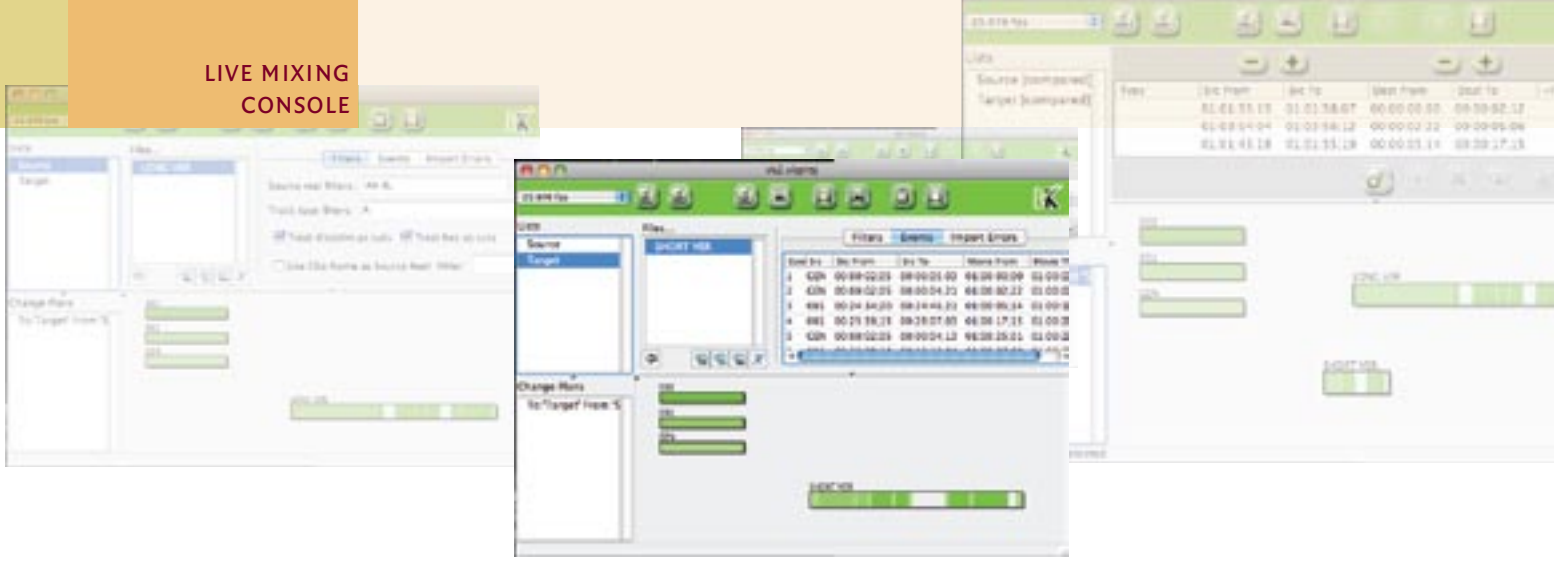
Conclusion

The Nagra LB is unlike any other recorder I have come across. It undoubtedly has idiosyncratic features like Bluetooth, dual screens, FTP, and on board editing. But in one sense these are joyous extras and accompany a solid professional feature set like hot swapping the CF card, USB storage, and (two) nice colour display(s). No one should buy a decent portable recorder without trying an LB. It has A* looks, feel and sound, and it retains engineering dignity and sophistication in this all too often shoddy world. And best of all when your local Apple lemming gets out his iPad and starts fingering it, you flash your LB and remark, "Only one screen. How quaint." AM

INFORMATION

£ GB£1,699.00 (exc.VAT)

Ⓐ Nagra Kudelski Ltd.
Ⓦ www.nagraaudio.com



Virtual Katy
VK Premium Collection V.3

LINDA CLINKER believes that the VK Premium Collection might just broach the divide between 'good' and 'brilliant' with its agony- and throttle-saving attributes.

BACK IN SEPTEMBER OF 2006, I was asked to write a review for Virtual Katy's totally awesome (dude!) VK 2 auto-conform and change management tool, a piece of software designed with the sole purpose of removing hours and hours of soul-crushing brain-ache from the poor guys and gals in sound departments all over the world who, once having completed their post-production audio masterpiece of The Final Edit, get the dreaded phone call from the editing department that consists of, "...Er... Guys? We've completely changed the picture cut..."

We've all been there. And this is where the good folks at Virtual Katy step in with the new and improved VK Premium Collection v.3.0 – and thereby go some way in preventing the audio department from throttling the video department, in one neat, very powerful, easy-to-use package.

System Requirements

VK Premium 3.0 works with Pro Tools versions 7.0 through 8.1 and also Nuendo 4, on both Mac and PC. It works using EDLs, Avid Change Notes, and now (in co-operation with Apple) it can be used to conform using XMLs from Cinema Tools. For those of you who work in animation and VFX, VK 3.0 also has an expression editor. Expressions are scary things, so I'll leave that to the animation experts!

For the purposes of this review, I'm using a MacBook Pro laptop, running OS 10.5.8 and a Pro Tools Mbox Pro running LE 8.0.3. Please note that if you haven't already, you will also need to have DV Toolkit installed if you are running an LE system. Apologies in advance for those of you who use Nuendo and Avid, I'm a dedicated Pro Tools and Final Cut Pro user!

You can purchase VK Premium direct from Virtual Katy's website (www.virtualkaty.com) or from selected resellers, but you will need an iLok account where a license can be deposited and then transferred to your desired iLok for it to run. But here's the best bit: the folks at Virtual Katy are so nice that you have the option of either buying VK Premium outright or you can opt for a weekly rental which is perfect for smaller studios and freelancers with their own kit. Genius!

> "...this is where the good folks at Virtual Katy step in with the VK Premium Collection v.3.0 – and thereby go some way in preventing the audio department from throttling the video department, in one neat, very powerful, easy-to-use package."

Operation

So you have just received the phone call informing you of 'The Changes', and after a few choice expletives and yet another cup of coffee, you have your original Pro Tools session open and now you need to make the changes for the new picture edit. Whereas normally, you'd most likely have to move and re-sync all your regions by hand and maybe also have to add new sections as well (which will take hours and enough coffee to keep you fired up for a month), this next bit will seem like magic. The first thing you have to do is set your session start time to one hour *before* your current session start time. For example: if your session starts at 01:00:00:00, go to the Session Setup window and change the Session Start time to 00:00:00:00, selecting the 'Maintain Time Code' option when prompted. This sets the Destination time for the about-to-be conformed audio. Why do you need to do this? VK Premium is non-destructive and makes use of Pro Tools copy-and-paste function to ensure that not only does your original work remain unaltered (i.e., it remains at 01:00:00:00 from where the audio is copied) but the changed audio will be pasted within the same session, at the start of the session (i.e., at 00:00:00:00). At this point, we leave Pro Tools and launch VK Premium (leaving your Pro Tools session open in the background)

Firstly, make sure that VK is set to the same frame rate as your Pro Tools session by using the drop down menu in the top left hand corner. Next to that is the 'Import EDL' button, which you use to import the original picture edit's EDL. You can import more than one EDL so for example, if one EDL has been created for each element: dialogue, narration, music, SFX, beds, etc, you can import them all at once. You can also now specify any filters that you would like to include. This 'folder' within the VK ▸

THE REVIEWER

LINDA CLINKER is a freelance audio engineer and video editor who has worked on everything end anything, starting out in recording studios before branching out into the games industry and high-end HD broadcast, doing such things as sound design and recording, video editing, motion graphics, location audio, studio maintenance and even a spot of roadie-ing. Occasionally, she puts down the cup of coffee long enough to see daylight.

window is by default named 'Version 1', but you can change that if you wish.

Now you can import your target EDL that will contain all the information from the changed picture edit. This is called 'Version 2' by default.

At this point, you need to go back to Pro Tools and select all your tracks and place the I-beam cursor at any point in the edit window and click on all the tracks to be conformed. Going back to VK Premium, you now press the 'Conform All' button (the one that looks like a couple of cogs) and hey presto! Your Pro Tools session starts to copy-and-paste the regions from your original session audio and pastes the re-conformed audio to the start of the session, in their new and correct positions! All you have to do now is reset your start timecode to the original time of 01:00:00:00 and everything will be synced up perfectly.

"I'm fully aware of... how time-consuming and thankless a task it can be to have to re-sync, re-spot, replace, and add audio to an existing project. VK Premium wipes out this agony in a flash..."

'But what if those sneaky pups in the video department have *added* some audio?', I hear you cry. No problem, ask them nicely to provide you with a bounced out guide audio track of the entire edit and import this into Pro Tools onto a new track. Then open the supplied OMF of the new edit, import this as session data into your recently conformed Pro Tools session – and where VK has left gaps in the correct places in the Pro Tools timeline, you can now select the required sections of audio from the newly imported session data tracks and move/insert them into their desired locations. You now have a Pro Tools session that perfectly matches the new picture cut. And in mere seconds too. See? I told you it was magic.

Location Locator

But that's not all it does… VK Premium can also conform your location-recorded audio and match up the required sections perfectly to the picture edit of the program. I won't go into detail here because I haven't got any location audio to play with, but basically, after placing each day's audio recordings onto their own tracks and spotted to their original timecode in Pro Tools, you import the video edit's EDL into VK, and filter the information so that only the edits with the same matching ID as the location audio's Source Reel ID will be used. You then send the EDL to the Change Plan Bin and the filtered EDL will then be used to assemble the audio. 'Conform All' will then start the process of the location audio being sync'd up to the required destination timecode in Pro Tools. Easy.

And that's the basics. For those of you who would need to use Avid Change Notes or a Cinema Tools XML, the process is slightly more complicated and not something I'll go into here for fear of causing confusion, but suffice to say, it works along similar lines and is again, a very intuitive process.

Conclusion

As both a video editor and a sound engineer, I can honestly say that I love this programme. I'm fully aware of how a video re-edit can unravel all the hard work that an audio department has already done, and how time-consuming and thankless a task it can be to have to re-sync, re-spot, replace, and add audio to an existing project. VK Premium wipes out this agony in a flash and does the job very, very well (just ask the sound guys and gals who work on *Dr Who* and *South Park*". Not forgetting the fact that Virtual Katy was set up by the audio folks who did such an amazing audio job on the *Lord of the Rings* trilogy. Just imagine how much re-sync-ing, etc, they had to go through on not one, but *three* films *and* the various re-edits and extended versions thereof.) The time VK Premium saves re-working a scene, an ad, a TV programme or a feature film frees up the sound person's time and creativity – and that could be the difference between something just being 'good' to being 'absolutely brilliant'. Which is what VK Premium is.

INFORMATION

US$2,000.00

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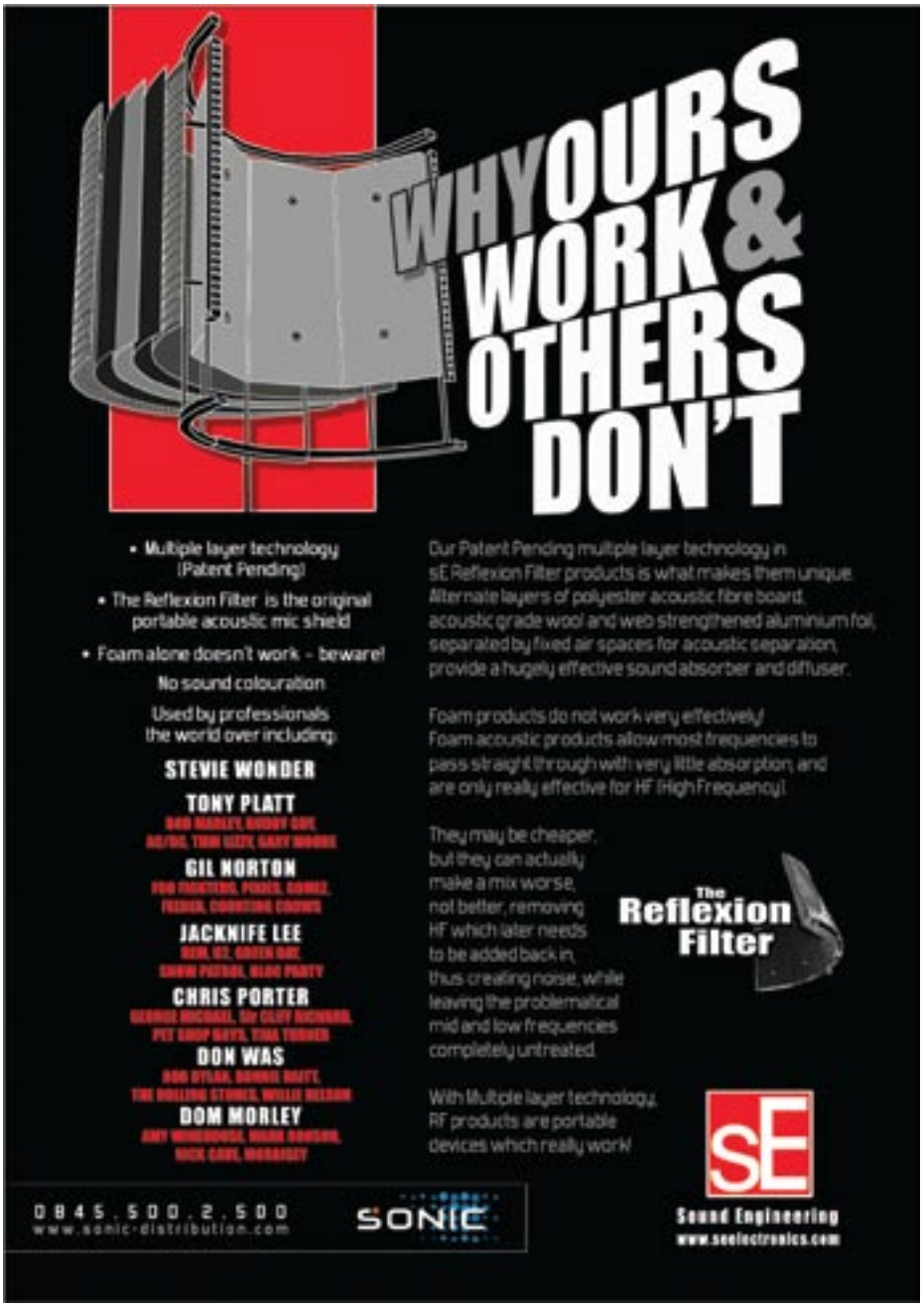

Say what You See

Audio Description

PAUL MAC visits ITFC, for an insight into the art of Audio Description and its place in the quest for maximum accessibility in media.

SUBTITLES ARE A WELL-ESTABLISHED SERVICE for hearing impaired viewers. In fact, it's now expected. Subtitling for 90 percent of ITV and Channel 4 programmes is in UK legislation, and the BBC is ahead of that as it already had a 100 percent target set for 2008. Other targets are in place for other broadcasters, most of which are being exceeded. Signing is less common-place, with a five percent UK government target for broadcasters.

The story is very different for blind or visually impaired people... "Television for the blind?" some may exclaim. Yes – though with apologies to those who already know where this is leading – that is the most common reaction.

In fact, there is a very practical solution that is much more commonplace than many people realise. It's mostly termed Audio Description (AD), though in some far-flung places (probably video facilities), it's called Video Description. Please feel free to pursue this debate in your spare time; we're sticking with 'audio'.

AD already has a very good presence on DVD releases, and is becoming more readily available in cinema and theatre. Indeed, AD and subtitling is a condition of funding from the British Film Council (what happens to that, if and when the Film Council gets abolished according to current government plans, is anybody's guess...).

In broadcasting, the current UK government target for AD is 10 percent of programmes, though the Royal National Institute of Blind People (RNIB) is campaigning to have that raised to 20 percent. After pledging in April last year to reach 39.000 hours of AD in 2009, Sky now boasts 20 percent audio description, though not on Sports or News. The BBC states that it has reached 10 percent AD on BBC One, Two, Three, Four, CBBC, and CBeebies.

Listen And Learn

It's difficult to get a true idea of what audio description brings to a TV programme without actually experiencing it. So before you get much older, if you haven't already tried it, switch on AD through your digital TV service, or put on a DVD with an AD track on it, and then close your eyes.

My first experience of AD was in the office of ITFC, a broadcast services company that specialises in subtitling, audio description, authoring/encoding, and lots more besides. That was where I met James O'Hara (Managing Editor, Audio Description) and Cherry Cole (Director Of Media Access Services).

O'Hara played me a section of video without AD and asked me to guess what was happening on screen. As another willing victim of the standard layman's AD introduction, I duly described the hazy, lazy Australian plain I was sure must be on-screen. Then, after opening my eyes, O'Hara opened them again by replaying Universal Studios logo preceding *The Incredible Hulk*. Point made.

AD is simply an additional narrative voice that describes action and scene in visual media for visually impaired viewers. In the case of the Universal logo, AD describes the globe, the animation, and reads the words on screen. It doesn't say, "...And here comes the Universal Studios Logo," because nothing in the visuals does that either.

Amongst the real action, AD has to occupy the gaps between dialogue, and ideally is a like-for-like replacement of the visual experience. Of course that is a difficult trick to pull off, so AD Editors have to use experience, judgement, and even restraint, to realise an informative and creatively unobtrusive experience.

My own first experience of AD was that I had a hard time taking in everything being said and holding concentration during busy sections of description. However, it was my first time and, according to O'Hara, visually impaired viewers are used to letting their ears be their way of visualising.

State Of The Art

The main tool for Audio Description in ITFC is Softel's Swift ADePT, developed specifically for scripting, editing, recording, and encoding AD and in part based on the timing and editing technologies developed for the Swift Create subtitling application. ADePT allows script development next to timecode-based in/out points and uses visual elements and word counts and so on to aid the process. Recorded audio clips can be stored on a shared server for audition by other workstations, and once complete, the finished description is exported in one of several variations.

James O'Hara, Managing Editor, Audio Description, ITFC.

The Audio Description is currently set mostly as a single level audio track. Some DVD releases have mixed AD, though given the dynamic nature of some soundtracks and the relative ease with which a basic mix could be achieved there may be room for improvement here. Even more surprising is that while there is always a client approval process, most of the big (US) films are audio-described at ITFC with no input from the original creative team – the Director, or even Editors. Cole points out that actually British distributors do take a keen interest: "There is no way we that we could do anything other than produce extremely good quality work, but I still think it's interesting that we're making quite detailed editorial judgements on somebody else's production."

In other words, all of the creative visual decisions made by the Director, the Cinematographer, the Editors, and so on, are interpreted by Audio Description. That's not to imply that AD has any dramatic license or mandate to interpolate on behalf of the viewer; but in choosing priorities, in choosing adjectives, in choosing tone and speed of delivery, interpretation must be unavoidable.

It does lead to the inevitable argument that maybe in film, AD should be included in, and locked along with the final audio mix?

All In The Art

This is not to imply that ITFC isn't up to the job. It has been leading the art of Audio Description in the UK for some time now, and O'Hara is a dedicated practitioner and has often consulted internationally on AD, its benefits, and its practice. He and his team have to be familiar and confident with the requirements of blind and visually impaired consumers and the nuances of description in that context. Take colour, for example... "The simple thing is that everyone, whether they've been blind from birth or have become blind, know that colours exist," explains O'Hara. "...What we try and do is give a little bit more colour to the colour, by using 'lush green grass', or a 'vivid red dress', or a 'sombre grey suit', or even a 'frumpy grey suit'.

"What we try and do is not make it too difficult for the person who's never had sight, and not make it too boring for the one who has had sight."

As such, it takes a very special combination of skills to be an audio describer. O'Hara: "When I set up the department here, we asked for people who were interested in AD to send in a recorded description of themselves in about 100 words. Anyone who didn't, wasn't considered. We've only once employed someone who didn't voice..." In that case, O'Hara found that if you don't voice your AD script, you'll never find out that your writing, while it might be a joy to read on the page, may not be so impressive to hear. "You have to write phrases with which you're comfortable," he explains. "And words that you know and like. We try to make it sound sensible, and we try to make it flow so that it's very much as if you're sitting with somebody, watching the film with them, and just talking them through it.

"We have the acronym of 'WYSIWYS', which is: 'What You See Is What You Say...' If that's what's on screen and you can get it in, then get it in. If that's not what's on screen, then don't try."

O'Hara recalls a specific example of where AD has the potential to over-step the mark. One film involved the psychological journey of a wheelchair-bound, inhibited, institutionalised man who eventually finds freedom again. A late scene has him wheeling down a street and into a crowd of people, obviously there to represent the wider world and the new opportunities available to the man. O'Hara says he was tempted to script it as 'out into the world,' to give the sense as well as the sensibility. It ended up as 'into the crowd'. "We're not there to tell the viewer what to think, or to interpret," says O'Hara. "AD is always going to be subjective in that you say what you see, and we all see different things, and might perceive differences in what's important... "

"Sometimes we get negative feedback, which is good because it lets us know... We had feedback about one description that said 'he sounded bored', so I had to go through and listen to it, and thought, yeah, he's probably right. So I then had to speak to the describer and say, 'this is what you have to do, this is how you deliver'. The important thing is that the describer is part of the movie, is part of the show, and makes you almost disappear – does that make sense?

Cherry Cole, Director of Media Access Services, ITFC.

"What we like is someone to come out of the cinema and say, 'Did you enjoy that film? What did you think to the AD?' – and have them say, 'Yeh it was fine.' And that's it, that's good."

O'Hara also uses the recent football World Cup as an example – a bad referee can spoil a game, and a good one doesn't get noticed too much. "We don't want the describer to be noticed," continues O'Hara. "But they are an integral part."

Positive Feedback

O'Hara does cites a very good example of the positive effect of AD. "This mother took her two sons and her husband to see a Bond movie – the younger son is blind, but he loves cars, and it was the one with the race across the frozen lake.

"His mother told us that, first, he loved the descriptions of the cars; second, she wasn't being 'shushed' by the people around her in the cinema; and third, she was actually able to watch the film... But the most important thing was that on the way home, all four of them were able to talk about the film they had just seen."

And that's what accessibility is all about. The technology, and the talent to make our media inclusive is in place and AD is making fair headway in all markets – ITFC describes several full-length films every week, as well as many broadcast productions. Broadcasters are continuing to respond to demands for ever-increasing accessibility, despite the ongoing costs of implementation.

There are some interesting sub-plots here. Will the raw materials of accessibility ever routinely fall under the jurisdiction of the original production? Can AD be put to work as a way of watching TV programmes on the radio? Will AD ever achieve the level of penetration that subtitling, for example, is at now? Can broadcasters afford it?

All interesting stuff for broadcasters, programme makers, and the companies that serve them.

INFORMATION

www.itfc.com

It was recently reported that ITFC Holdings had appointed an administrator and that ITFC itself had been put up for sale. At the time of going to press the news was that ITFC is open for business as usual, and is optimistic about its future.

Surround Tools

Surround sound comes with it's own challenges, and evey challenge, it seems, comes with a fair few tools aimed at overcoming it. From creative panning solutions to surround sound acquisition; from speaker management to up-mixing – we've selected a few for your listening pleasure...

TL Autopan from Avid has a large array of panning effects based on classic analogue panning units, for use with Pro Tools. The rhythmic, musical panning effects are powered by features first seen in TL EveryPhase, such as flexible tempo synchronisation, trigger, and envelope detection features. TL Autopan includes graphic metering of output and pan position for precise control of panning effects. It is compatible with Mac OSX and Windows XP.

www.avid.com

The DPA 5100 mobile surround microphone has three front microphones that are time co-incident, which eliminates comb filtering and ensures frequency consistency when downmixing to stereo or mono. The rear microphones, which feature standard omni-directional patterns, are spaced from each other and the front array to simulate natural time arrival differences. The LFE (.1) channel is comprised from a L/R sum, which is then attenuated 10db in comparison with the signal from the main channels.

www.dpamicrophones.com

The Lexicon PCM96 parallel stereo and surround reverb/effects processor can be used as a plug-in with a DAW, or can be kept connected to a mixing board; offering a variety of configuration options without having to move cables. It is available with either six XLR stereo AES inputs and outputs, or two DB25 six-channel analogue I/O, and one DB25 six-channel digital I/O. Both versions feature MIDI, Wordclock, Ethernet, and Firewire.

www.lexiconpro.com

The See 'n' Sound series of software by A&G Soluzioni Digitali comes in three different versions: See'n'Sound for X-spat boX, See'n'Sound for Alias Maya, and See'n'Sound LE. The software captures 3D audio by catching the movements and positions of up to eight subjects directly from video images using MIDI control change messages. The proprietary Ghost Window lets users sync the audio 3D paths to the behaviour of the actor. It can be controlled from ProTools, Nuendo, or from a Betacam.

www.aegweb.it

The DTS Neural Surround Upmix will transform any stereo signal into surround sound. If audio has been encoded using DTS Neural Surround DownMix, it can be restored with the correct information to deliver a near-discrete 5.1 surround sound signal. Stereo content that has not been encoded can be translated into width and depth information, and matrix-encoded LT/RT stereo signals can by upmixed by DTS Neural Surround. The technology spectrally separates individual audio elements and places each in its intended location within the surround environment.

www.dts.com

The Martinsound MultiMAX EX family of multi-format monitor controllers adds surround sound monitoring to a console or DAW. The MultiMAX EX effectively replaces the console monitor section, providing surround sound mix bus monitoring, as well as downmixing, encoder sends, and decoder returns. It is still possible to listen to the console, so PFL and external sources can be checked. The system also folds down multi-channel mixes so users can hear how they will sound on other playback systems.

www.martinsound.com

DK-Technologies offers the MSD600M++ Master Stereo and Surround Sound Meter. This piece of kit is a compact modular unit, featuring DK-Technologies exclusive Jelly-Fish and StarFish surround indicators. The level and energy content of all channels is easily recognisable on the screen, and signal correlation and phase errors in individual vectors are immediately highlighted by different colours. The Peak Programme Meter measures the level of up to 32 audio channels simultaneously, and seven scales are directly selectable to conform to the standard used.

www.dk-technologies.com

Holophone claims that its H2 5.1 PRO surround sound microphone is the only patented device specifically designed for capturing discrete 5.1 channels of surround sound for all professional audio applications. Based on the H2-PRO model, the microphone is compatible with all eight-channel mic pre-amps, location recorders, and recording consoles providing phantom power. It is also compatible with all surround sound encoding and playback formats, including Dolby, DTS, Circle Surround, and Neural Audio.

www.holophone.com

Minnetonka Audio's Surcode for Dolby E is available for Pro Tools workstations and provides faster than real-time Dolby E encoding directly from the Pro Tools timeline. SurCode can integrate Dolby E into an existing tape-based workflow from a Pro Tools timeline or from a live AES/EBU input feed from the deck. Users can also lay back Dolby E assets to tape while using SurCode for Dolby E Decoder as a live input confidence monitor for real-time Dolby E encoding.

www.minnetonkaaudio.com

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Jussi Väisänen, the Lead Acoustic Designer behind our 8260A Three-Way DSP Monitoring System.

THREE WAY REVOLUTION. WWW.GENELEC.COM/8260A

Mix 51 from Neyrinck is a 5.1 surround panning and mixing plug-in for Pro Tools LE systems. Unlimited mono surround panner and stereo surround panner plug-ins can be placed on track inserts to pan, mix, and send to the Mix 51 surround mixer busses. The plug-in provides three independent 5.1 busses so users can manage submixers such as dialogue, music, and FX. It also provides a stereo LT/RT output compatible with Dolby Pro Logic II decoding systems. Both the Mix 51 Surround Panner and Surround Mixer feature fully automatable controls.

www.neyrinck.com

The Double M/S System is Schoeps' improvement on the M/S stereo recording technique. In addition to a front-facing cardioid or super-cardioid mid microphone and a figure-of-eight side microphone, a rear-facing directional microphone is set up. The front- and rear-facing microphones share the signal of the figure-of-eight microphone so as to form two complete back-to-back M/S systems. One M/S system then provides the three front channels, while the other system provides the two surround channels.

www.schoeps.de

The TC Electronic DB-8 is a digital transmission processor that is used for real-time loudness control and format conversion. DB-8 is compatible with almost any data reduction system. It can route and delay Dolby E encoded signals, so the same signal path can be used partly for linear stereo, partly for data-reduced audio. DB-8 interfaces directly with standard master control applications, with changes applied using serial control, GPI, or Ethernet. Multiple units can be monitored via SNMP trapping.

www.tcelectronic.com

Penteo offers technology to transform stereo recordings, soundtracks, and live television broadcasts into true 5.1 surround sound. At the core of the system is a proprietary stereo panorama slicing algorithm that creates a clean and clear 5.1 surround experience. Penteo has just developed the Penteo/RT broadcast appliance which converts live stereo broadcasts into 5.1 surround on the fly, giving broadcasters the ability to automatically send out all their programming as a 5.1 mix simultaneously with stereo transmissions.

www.penteosurround.co.uk

The DSF-2 Broadcast Microphone System has been specifically developed by Soundfield to simultaneously provide both the surround and stereo soundscapes at large scale outside broadcast events such as football stadiums and concert hall venues. The multi-channel audio it generates from a single point source is completely phase coherent, enabling the broadcaster to collapse the surround to stereo or mono for TV and radio feeds without loss of information or frequency imbalance.

www.soundfield.com

Respatializer, from The Sound Guy, is an advanced panning, surround sound, and spatialisation plug-in for Windows and OS X. It supports up to eight input channels, each of which can be individually panned. The panning is presented in a heads-up display with access to positioning, channel gain, mute/solo selection, and spreading. Other special processing includes variable-rate source rotation that can synchronise to the host tempo, low-frequency effect tools for monitoring or bouncing to disk, and a large variety of output speaker formats.

www.sfxmachine.com

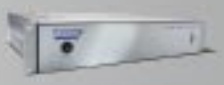
The SurroundControl 31900 series is RTW's flagship product line for controlling, analysing, and monitoring stereo, surround sound, and multi-channel programs. It has a unique eight-channel combination of surround sound metering and analysing, with the monitoring controller and router fully integrated into one system for external VGA displays. The Surround Sound Analyser gives in-depth evaluation of any surround program up to 7.1, and it has multi-standard PPMs and ITU BS.1771 loudness metering for stereo and surround channels.

www.rtw.de

Soundfield's UPM-1 is a 19-inch rack processor designed to create 5.1 material from old programme material that only has a stereo soundtrack. All of the material in the 5.1 mix that appears in the processor's outputs is derived from the spatial information present in the original stereo signal. It generates 5.1 from two channels by analysing the original stereo audio using a patented algorithm, which separates the audio into direct and ambient components.

www.soundfield.com

Trinnov's Optimizer is a full-featured loudspeaker processor that combines automatic algorithms with flexible fine-tuning tools. It has a variety of applications, including mix translation in film and post-production, allowing improvements in tonal balance and giving the ability to align a room for mixing in stereo, 5.1 ITU, or 5.1 SMPTE by switching presets. The ST2-Pro monitor features the new Trinnov audio interfaces, the AES2 and the ADA4, which are connected to the new Trinnov core, a high performance digital audio engine.

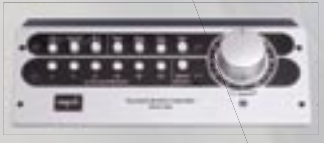


www.trinnov-audio.com

Sanken says that its WMS-5 is the world's first five-channel surround microphone that is self-contained in one microphone body. It features a precise phase coherent M, S, M capsule layout. The front M capsule is used for both C and front L, R. The S signal is for both front L, R and rear LS, RS. The rear M capsule is used for LS and RS. Capsules are set vertically on the same axis for precise phrase coherence. The front C capsule has shotgun directivity.

www.sanken-mic.com

The SPL Surround Monitor Controller (SMC) is a one-point analogue volume control and switching matrix for system-independent 5.1 surround and stereo monitoring. Monitor levels and source management can be handled independently of production software, with no need to set up additional aux sends or an alternative surround master for monitoring. Several input sources can be managed at the same time, making it simple to compare and monitor SACD or DVD material.



www.spl.info

The Waves M360° Surround Manager can be used for surround sound design or mixing. It offers phase, subsends, mute, solo, delay, and level adjustments for each of the main channels, and also provides bass management with variable crossover frequencies for sub/satellite speaker system monitoring. It offers the ability to align surround monitors for playback, and provides a bass-management solution. PC and Mac compatible, it has ten mix-down formats and supports TDM, RTAS, Audio Suite, and VST.
www.waves.com

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video guide

A Sound Pro's Guide To Video

Colour Grading Part 7

KEVIN HILTON charts colour grading's move into digital territory.

All equipment for a specific purpose does the same basic job. A camera records moving pictures, a video editing system cuts pictures, a telecine machine transfers film images on to electronic media, and a colour corrector allows individual colours in a scene to be manipulated and changed. But the different products designed for a market each have a particular way of approaching the job, otherwise there would be just one system and one manufacturer, much like Acme in the *Roadrunner and Wile E Coyote* cartoons.

Several companies established themselves in the colour correction sector during the 1980s and into the '90s – and more have entered with the advent of digital intermediate technology – but two manufacturers dominated the field and helped lay the foundations of modern, creative, but still technology-led, grading.

Both da Vinci and Pandora International gave colourists the tools to make major, creative contributions to the filmmaking process. But each has its own philosophy as to how this should be done. Both were developed in the wake of the Cintel TOPSY (Telecine Operations Programming SYstem), a pre-programming device introduced in 1978 that enabled correction settings to be stored scene by scene.

As rudimentary as this was by today's standards, TOPSY was the first step in colour grading moving from being an engineering function to a something approaching an art form. Once all the settings had been made, projects could be finished by laying off footage to tape while the corrections were made in real time.

> "The Classic had been built by hand in small production runs. Apparently no two machines were the same..."

This gave graders more control, but there was the realisation that more could be done through the appliance of science and technology. The people who run systems have clear views on what they need from a product, and broadcasting is full of instances where operators and engineers have got together and created a machine to meet specific requirements.

Scientific Evolution

Both the da Vinci Classic and Pandora International's Digigrade evolved in this way. The Classic developed from a system called the Wiz, designed by engineers at Florida post-production facility VTA to satisfy the demands of its graders and clients. Across the Atlantic Mike Walker, a Colourist at the Moving Picture Company (MPC), teamed up with designers Steve Brett and Arthur Sutton to produce the Digigrade.

The last Video Guide looked at how Pandora moved on from that first product, developing the Pogle workstation in 1984-5. By this time da Vinci had been established as a stand-alone company to manufacture what had become the Classic controller and colour corrector.

The aim behind the Classic was for it to offer third party colour correction with finer colour over both primary and second grading. This differed from Pandora, which initially controlled only primary correction. The da Vinci systems also featured a range of manipulation tools, including Power Windows, the trademarked name the company used for masks (see glossary). These are used to isolate specific parts of an image and work in conjunction with other controls, including luminance keys.

Over time the control capability of the Classic was extended so it could run video tape decks, noise reducers, still stores, and other equipment used in a telecine suite.

By 1985 the analogue version of the Classic was widely used in conjunction with the Bosch FDL 60 telecine. Cintel had continued developing its own controllers, producing a successor to TOPSY in 1983. AMIGO ran on micro processors, a big leap on from its predecessor's punch-hole computer tape, with settings stored on 5.25-inch floppy disk or the integral memory of the host computer.

Competition from both da Vinci and Pandora became fiercer, however, and eventually Cintel pulled out of the controller market and began to accommodate third party workstations. Da Vinci introduced Classic support for the Cintel MkIII telecine machine in 1986, with customised external control panels to run the internal primary and secondary processing, as well as an on-board NTSC encoder. The MkIII Classic was based on a 68000 Intel Multi Bus 1 computer; programming decisions and the colour correction list were held on a 20MB MMF hard disk, backed up on 5.25-inch floppy.

Pass It On

Unlike Pandora, which, after an initial parting of the ways between founders has remained under the same ownership over the years, da Vinci has passed through several corporate hands. In 1987 the company became part of the Dynatech Video Group, which also owned Utah Scientific, ColorGraphics Systems, and Quanta.

Utah Scientific took over responsibility for da Vinci and moved all manufacturing and support operations to its headquarters in Salt Lake City. Utah Scientific is well known for its routing and switching products, but did not have experience of what can be called creative technology, such as colour correctors.

The Classic had been built by hand in small production runs. Apparently no two machines were the same, so the decision not to move da Vinci staff from their original base in Fort Lauderdale, Florida, to be involved in manufacturing seems an odd one. Field service and support continued to be run from Fort Lauderdale, while production of the Classic continued in Salt Lake City.

Because Utah Scientific was unfamiliar with manufacturing colour correctors, product quality fell. Customers were not happy and in late 1988 control of da Vinci products was transferred to another Dynatech subsidiary, ColorGraphics Systems, based in Madison, Wisconsin. ColorGraphics' management clearly did not want to repeat the mistake made by Utah Scientific and so moved da Vinci production back to Florida, although the product line was re-branded as ColorGraphics da Vinci.

GLOSSARY

Masks

A commonly used device in filmmaking, both live in front of the camera and in post-production. In-camera masks, also known as mattes, have been described in earlier Video Guides about cameras and special effects, but in all cases a mask is used to either emphasise part of an image or block out a portion of it. In colour grading a mask or matte is used to highlight a specific area in a scene. This is selected much in the same way as with a photographic manipulation program such as Photoshop; the cursor is used to outline the part of the picture the grader wishes to work on. The modern software in today's correctors allows the colourist to make such a selection quickly and accurately and then change the colour of the isolated section, leaving the rest of the image untouched.

Colour Grading: Part 7

A Technological Renaissance

With the situation stabilised, da Vinci worked on improving and further developing the Classic system. This resulted in a new product, the Renaissance, which appeared in 1990. This was similar to the Classic – both were analogue systems – but the Renaissance was housed in a new mainframe.

In the same year da Vinci produced an external EMC (Ethernet Machine Control) chassis to support Cintel's URSA digital telecine, which had been introduced the previous year. The EMC unit was connected to the TK machine using a multi-use Ethernet control board, which replaced the 68000 extended memory board. The CPU board of the Renaissance was upgraded from a 68000 to the 68020, while the floppy drive back-up became 3.5-inch instead of 5.25. On the creative side a third control unit was added, the Soft panel.

1991 was a significant year for da Vinci, in both corporate and technological terms. Kilovectors were introduced, giving the still largely analogue Renasissance system advanced digital secondary colour control. This feature gives hue-qualified and scaleable correction on a defined range using three control panels.

Go, Go All-Digital

A fully digital workstation was introduced later in the year; the Renaissance 8:8:8 featured digital video processing, with the inputs being standard 4:2:2 and optional 4:4:4. These were up sampled to 8:8:8 for high quality internal processing.

The move to digital enabled greater control over colour manipulation. Tools for this included: Power Windows; YSF, with independent adjustment of chrominance and luminance; Custom Curves, which allow operators to individually edit the gamma curve for luminance and RGB; and a key input channel.

Renaissance 8:8:8 was designed to work with the Bosch FDL60, FDL90, and Quadra and the Rank Cintel MkIII and URSA. Early versions for the URSA were 4:2:2 only and had to have the additional EMC interface running with the telecine's control busses.

In the boardroom the company became autonomous for the first time since it was acquired by the Dynatech Video Group and renamed itself da Vinci Systems Inc. This move gave da Vinci greater control over its destiny, not just in the development of its own products but also the freedom and resources to grow by acquisition.

The company took the opportunity to do this in 1994 when it bought the TLC product range from Time Logic, taking it into the area of edit control. Although da Vinci systems had tape-to-tape options and internal interface cards for working with telecines, its VTR control capability was limited. Adding the Time Logic Controller (TLC) to its product line gave da Vinci greater flexibility and appeal in the post-production environment.

> "In the boardroom the company became autonomous for the first time… This move gave da Vinci greater control over its destiny, not just in the development of its own products but also the freedom and resources to grow by acquisition."

A Little Bit Of TLC

The TLC first appeared in 1984 and was developed to replace the AVRS. The AVRS had been designed by Jack Calaway and was the first film-to-video tape edit controller, ensuring that every edit on a tape happened between film frames and delivering a 3:2 pull-down. It worked in conjunction with Rank Cintel telecines, controlling two VT decks, using CMX compatible interfaces for interconnection.

TLC was designed by a team led by Jim Lindelien of Time Logic, Joe Wolcott (an employee of Composite Image Systems but working in a freelance capacity on this project), and Gary Adams from Adams Engineering. Features included 3:2 compatibility, giving field accurate editing and sync points for marrying up the film footage to tape timecode at differing frame rates.

As was common at the time the controller commissioned by a post-production house, the now defunct Unitel Video. The TLC design team collaborated with the in-house engineers, including Paul Chapman, who Jim Lindelien describes as an expert in Rank Cintel telecines. This proved useful as Chapman had to repair Unitel's MkIIIC every time it was blown up during development of the TLC.

After buying the rights to the edit controller da Vinci released TLC 2 and an option to have the system built into the DUI 8:8:8 was added to the Renaissance. In other cases an external A/B box had to be added to connect the TLC and the colour controller.

Next Month...

Next month's Video Guide will continue to chart the development of da Vinci systems and detail how Pandora moved into secondary colour control.

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news

Spanish manufacturer SGO has moved into 3D colour correction with Version 5 of its Mistika system, which is being unveiled at this month's IBC in Amsterdam. The new software package is supported by an intuitive interface and offers tools for stereoscopic working, as well as 2D, with full grading capability up to 4k in real-time, 2D compositing, and connectivity to the RED camera and other production chains.

SGO claims Mistika Version 5 has been designed to be 3D capable from the outset. As part of a digital intermediate (DI) production network it is fully compatible with over 200 native image formats, thereby allowing post-production projects to begin straight away the need for format conversion or additional processing.

In addition to colour correction and manipulation capability Mistika offers de-grain and noise reduction functions. Other features include real-time geometry matching, real-time colour matching, convergence functions (in other words interactive and animated parallax modifications), inter-ocular distance interpolation, a full stereo 3D compositing environment with multiple stereo 3D visualisation modes, real-time floating windows, real-time Z-Depth shot transitions, formatting for any stereo delivery format, dual stereo 3D ingest in both progressive and interlaced forms.

Because Mistika has an open architecture with widely available storage, any other system in the post-production suite, regardless of make and type, can be linked to files stored on the colour correction workstation. SGO claims this makes for a 'truly open workflow' between Mistika and third party systems. The manufacturer says this means Mistika can be easily integrated into an existing post-production facility.

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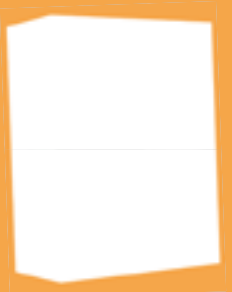

Alan Rickman?

loud/SH1RT

Have you ever wished your clothes were a bit louder? No, we don't mean that it's time to dig out that horrendous Hawaiian shirt tucked at the back of the wardrobe, but clothes that actually make noise. Benoit Maubrey, artist and founder of The Audio Gruppe, uses audio clothes in his work. "My artistic tools are electro-acoustic clothes: costumes and suits that are equipped with loudspeakers and amplifying systems that allow the individual wearers to react acoustically to their environment." said Maubrey. "Basically each person wears one part of a composition: the position of the individual 'audio actors' and their movement within a space produces the final composition. The orchestration of the mobile sounds creates the final musical score."

Since 1989 his group of Audio Ballerinas have been choreographed into site-specific audio ballets using samplers, contact microphones, light-to-frequency controllers, MP3 players, and radio receivers that allow them to work with the sounds, surfaces, architecture and electromagnetic waves of the space around them. In his more recent Audio Peacock project, wearable electro-acoustic instruments are constructed from polycarbonate plexiglass material shaped into a peacock's fan-like plumage – these are highly directional and function similarly to an electro-acoustic radar dish. An Audio Peacock can use sensor-controlled electronic instruments or amplify and alter its own voice using a built-in microphone, sampler, and digital filter mechanisms. The Peacock can also receive sounds from outside sources via transmitter/receiver and disseminate them in a space by orienting its high-tech 'plumage'.

Something to think about next time you're not sure what to wear to work.

www.benoitmaubrey.com

drum/B3ATS

What do you do for fun when you are a Swedish software musical instrument maker? Propellerhead Software decided to create the world's largest drum machine. Using Reason 5's new Kong Drum Designer, the Propellerhead team installed an enormous drum machine the size of a building, with a funky light-up dancefloor-type affair which used Max/MSP to do the sensor readings and to send MIDI notes to Reason. Set up on a Stockholm street with the 'screen' projected onto an office block, locals were invited to dance to create their own beats. Sadly, the giant drum then had to be removed as Propellerhead didn't actually have permission to be in any of the places it was set up. But the company hopes that it might come out to play again soon...

www.youtube.com/watch?v=oYkoI5lY9Tg

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